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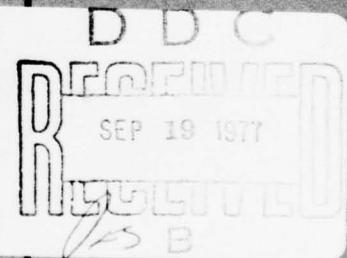
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CONSUMER AND WORKER OPINIONS OF
CASH FOOD SYSTEMS: NAS ALAMEDA

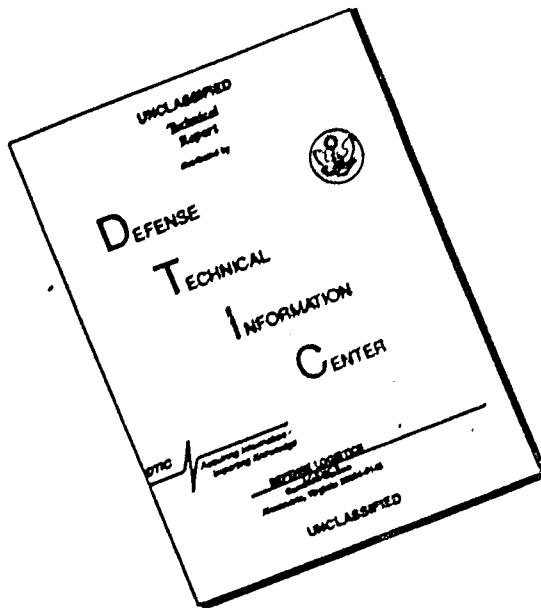


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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) In order to evaluate the effects of the conversion from traditional military dining hall service to CASH/A La Carte upon both the enlisted consumer and the food service worker at NAS Alameda, paper-and-pencil surveys and face-to-face interviews designed to provide an in-depth assessment of the attitudes and opinions of the respondents toward the food service system were administered to selected samples of each of these two populations both before and after the conversion. The two primary features of the CASH/A La Carte system-- an all-	over 392674		

COMRATS policy and item pricing-- were preferred to the alternative choices of a mixed COMRATS/RIK policy and flat-rate meal or "special" meal pricing by a majority of respondents. Improved food quality and greater meal variety, both for "regular" and "short-order" type meals, appeared to be the most salient features of the food service system contributing to the positive change in consumer attitudes toward the facility. One problem for the consumers created by CASH/A La Carte was an apparent increase in waiting time in the food service line from pre- to post-CASH/A La Carte measures. The negative effect of increased waiting time was apparently more than offset by the positive effects of improved food quality and variety; however, since overall attitudes toward the Alameda facility in general were significantly more favorable in spite of the increased waiting time after the CASH/A La Carte system had been implemented than they were prior to CASH/A La Carte.

Surveys and interviews were also administered to military food service workers both before and after the conversion to CASH/A La Carte. In general, opinions of CASH/A La Carte among the workers were more negative following conversion to the new system, both in comparison to the traditional system that it replaced and in comparison to their preconceptions about the new system recorded prior to the conversion. The primary complaint of the post-conversion worker sample concerned the longer working hours and generally heavier workload, which was perceived as particularly burdensome because the workers rightly or wrongly claimed to anticipate "easy" shore assignments in compensation for rigorous sea duty.

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PREFACE

The reader should note that the official name of the research organization preparing this report has changed twice during the course of the research described herein, from U.S. Army Natick Laboratories to U.S. Army Natick Development Center to U.S. Army Natick Research and Development Commands, its most current designation. All are, in fact, one and the same organization.

Special acknowledgment and thanks are due Ms. Nancy Cobean and Ms. Constance Stepp for their valuable aid in analyzing and interpreting the data.

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CONSUMER AND WORKER OPINIONS OF CASH FOOD SYSTEMS:
NAS ALAMEDA

INTRODUCTION

When joining the military, an enlistee enters into a contract with the Government under which both parties make certain commitments to one another. One commitment made to the individual is that he will be provided with subsistence. Traditionally, the Armed Forces have taken a dualistic approach toward meeting this obligation. Generally, married personnel and higher grade singles are given a daily monetary allowance (termed commuted rations, or COMRATS, in the Navy) with which to purchase food. These persons are permitted to utilize military dining halls but are charged a flat rate for each meal eaten (currently, \$0.55 for breakfast and \$1.05 for lunch or dinner). The remaining personnel, mostly lower grade and unmarried, are placed in a rations-in-kind, or RIK, status. Instead of receiving a monetary allowance, they are authorized to eat meals in the dining hall at no cost to them.

Despite the fact that they are not reimbursed for meals obtained outside of the dining hall, the majority of RIKs have reported using the dining facility on an infrequent basis only (e.g., Branch, Meiselman, & Symington, 1974; Siebold, 1976).^{1,2} Because of these low attendance rates and rising food costs, among other reasons, the Air Force Tactical Air Command undertook a test in 1972 at Shaw AFB, South Carolina, of a modified form of the traditional food service system. It involved two essential changes: First, all airmen were placed on COMRATS (termed basic allowance for subsistence, or BAS, in the Air Force) and, second, airmen were required to pay for meals in the dining hall on an item by item (A La Carte) basis. These primary changes produced several secondary outcomes, some positive and some negative: On the positive side, an expanded variety of foods was made available at any given meal, and control over portion sizes was

¹Branch, L.G., H.L. Meiselman, & L.E. Symington. A consumer evaluation of Air Force food service. U.S. Army Natick Laboratories Technical Report, #75-22-FSL, 1974.

²Siebold, J.R. Do people eat in dining halls as often as they say they do? U.S. Army Natick Research & Development Command Technical Report, #7T-11-FSL, 1976.

increased; however, on the negative side, longer delays through the serving lines also occurred.

In evaluating this system, assessments were made from a number of perspectives-- economic, nutritional, and consumer satisfaction. The results of the latter analysis have been reported by Siebold and Meiselman (1974).³ In general, Shaw airmen expressed significantly greater satisfaction with the food facility than did airmen at bases with traditional food service systems. It should be noted that these results cannot be unambiguously attributed to the system changes mentioned, since at the same time the interior and exterior of the Shaw dining hall underwent major renovations, which could have been at least partially responsible for improvements in customer attitude, perhaps interacting with the system changes. Encouraged by the success of the test system of Shaw AFB, the Assistant Secretary of Defense for Installations and Logistics directed each service to conduct its own test of the system. The Air Force implemented the modified food system at Loring AFB, Maine, in January 1975. From the viewpoint of those involved in assessing consumer and worker reactions, the Loring AFB test provided a more valid test basis than did the Shaw test. First, changes other than those directly required in implementing the test system was minimized at Loring AFB, whereas (as noted above) major unrelated changes had accompanied the test system at Shaw AFB. Second, consumer and worker attitudes at Loring AFB were measured both before and after conversion to the new system, providing more reliable grounds for assessing the test effect than had been available at Shaw AFB, where comparisons were between the attitudes of the Shaw airmen after the system was instituted and those of airmen at other Air Force bases. Notwithstanding these differences, the Loring test corroborated the Shaw findings in showing a general improvement in both consumer and worker satisfaction due to the test system (Siebold, Symington, Graeber, & Maas, 1976).⁴

³ Siebold, J. R., and H. L. Meiselman. Consumer evaluation of cash food systems: Shaw Air Force Base. U.S. Army Natick Development Center Technical Report, #75-77-FSL, 1974.

⁴ Siebold, J. R., L. E. Symington, R. C. Graeber, and D. L. Maas. Consumer and worker evaluation of cash food systems: Loring AFB (Part I - Short term findings). U.S. Army Natick Research & Development Command Technical Report, #76-35-FSL, 1976.

Two factors, however, qualified these findings. First, a longer term follow-up at Loring AFB 11 months after the test system was implemented indicated a decrease in satisfaction from the relatively high level expressed shortly after the system changes were effected, among both the workers and those consumers who had previously been in RIK status. Despite this reversal, however, attitudes of these two groups still remained more positive than those elicited before the test system was implemented (Siebold, Symington, Maas, & Graeber, 1976).⁵

Second, despite the enhancement in satisfaction, the new system has not significantly increased attendance at either Shaw or Loring AFB.⁶ Since one of the primary objectives of the test was to get people to use the dining system more often, this finding seriously qualifies the success of the system in improving customer and worker attitudes.

The next test was conducted by the Navy at NAS Alameda, California, where the system (termed CASH/A La Carte) was put into effect in March 1976. A previous survey study had shown considerable discontent among the NAS Alameda personnel with regard to installation food service (Siebold, Symington, Meiselman, & Rogozenski, 1975).⁷ Correspondingly, attendance at the NAS Alameda dining facility seemed lower than it could have been, based on the self-report measures used.

To assess the reaction to the CASH/A La Carte system among the consumer population and food service workers at NAS Alameda, surveys and interviews were administered to the two groups both before and after the system was changed. As in

⁵Siebold, J.R., L.E. Symington, D.L. Maas & R.C. Graeber. Consumer and worker evaluation of cash food systems: Loring AFB (Part II - Long term findings). U.S. Army Natick Research & Development Command Technical Report, #7T-6-FSL, 1976.

⁶See trend reports from the respective tests; e.g., Department of the Air Force, Tactical Air Command. USAF/BAS/A La Carte Food Service Concept - Trend Data Report No. 14, 1975.

⁷Siebold, J.R., L. E. Symington, H.L. Meiselman & J.E. Rogozenski. Consumer and workers opinions of a proposed cash food system: NAS Alameda. U.S. Army Natick Development Center Technical Report #76-9-FSL, 1975.

each of the previous tests, this work was done by the Behavioral Sciences Division of the U.S. Army Natick Research & Development Command, Massachusetts. The purpose of this report is to present the findings from these surveys and interviews at NAS Alameda.

METHOD

As in the Shaw AFB test, the change to CASH/A La Carte at NAS Alameda was accompanied by other changes, most notably, a complete renovation of the dining facility interior. Since the latter changes were capable of influencing consumer and worker attitudes, there was concern that the effects of these changes would become confounded with those produced by the changes integral to CASH/A La Carte, especially since the dining hall renovations were completed only 3 weeks prior to the conversion to CASH/A La Carte. In an attempt to avoid this confounding, the pre-test surveys and interviews were administered only 1 week before the new system was to take effect, respondents being instructed to answer questions based on the atmosphere of the dining hall as it then existed, with renovations, rather than on its atmosphere prior to any of the changes. The success achieved by this procedure in separating the two potential sources of attitude change is indeterminable.

A second problem encountered in this project pertained to the classification of respondents according to ration status. It has been the standard procedure in previous studies to divide the consumer survey/interview sample according to ration status, COMRATS versus RIK, and to analyze the responses of the two groups separately. This procedure has been justified by the differences consistently found between the two groups in their food habits and attitudes, e.g., Siebold, Symington, Graeber, and Maas.⁸ This task was complicated at NAS Alameda where, in preparation for the start of CASH/A La Carte in March 1976, many RIK personnel were prematurely converted to COMRATS, some as early as January 1976. To have divided the sample on the basis of ration status at the time of testing, therefore, would have seriously misrepresented the actual situation. To avoid this, all personnel on RIK status as of January 1976 were considered as one group, separate from the remaining COMRATS group. The latter group was further subdivided on the basis of marital status. The RIK group contained too few married personnel to warrant the formation of a separate subgroup. In the remainder

⁸See footnote 4.

of the report, therefore, reference will be made to six different groups: Pre-Test RIK, Pre-Test S-COMRATS, and Pre-Test M-COMRATS, referring to those personnel surveyed/interviewed 1 week prior to CASH/A La Carte who, respectively, were in RIK status irrespective of marital status, single and on COMRATS, and married and on COMRATS, all as of January 1976; and Post-Test RIK, Post-Test S-COMRATS, and Post-Test M-COMRATS, referring to those personnel surveyed/interviewed 2½ months after the start of CASH/A La Carte who shared the other characteristics of the corresponding Pre-Test group.

Consumer Interviews and Surveys

Four different opinion instruments were used in the test. Two were personnel interviews, one for the Pre-Test and one for the Post-Test, administered by one of three senior staff members of the Behavioral Sciences Division of the U.S. Army Natick Research & Development Command, Massachusetts. One staff member was involved in both the Pre- and Post-Tests, while the two others each participated in one test only. Copies of the two interview protocols are contained in Appendix A. Of the total 46 questions in the Pre-Test interview and 58 questions in the Post-Test Interview, 37 were in common, allowing for direct Pre/Post-Test comparisons, while the remainder pertained to only one of the tests. Four topics were addressed in the interviews: (a) demographic characteristics of the respondents; (b) their current food habits; (c) their opinions of the dining hall and its food; and (d) their opinions of CASH/A La Carte. The Pre-Test group responded to the last category of questions on the basis of their preconceptions about the system, whereas the Post-Test group reacted to the system as it had actually been implemented. Three types of questions were involved--objective, rating, and open-ended questions. Rating questions required the participant to select one of a number of scaled responses printed on a card shown to him at the appropriate time by the interviewer. Open-ended items allowed respondents to provide as little or as much information as they wished, with interviewers recording the responses verbatim. At a later date, the responses were assigned to categories independently by two members of the Behavioral Sciences Division using preconstructed categories based on the original responses. Initial agreement between the two judges occurred in 86% of the cases, the remainder being categorized following discussion and mutual agreement.

The remaining two opinion instruments were paper and pencil surveys. The first was the 1974 edition of the Consumer's Opinions

of Food Service Systems (COFSS) survey, which has been routinely used by the Behavioral Sciences Division in its assessments of consumer satisfaction within military food service. It was administered during both the Pre- and Post-Test. The survey is comprised of 57 questions covering a wide range of variables involved in food service. A copy of the survey is contained in Appendix B-1.

The second paper and pencil survey was a brief, one-page insert to the COFSS survey, administered at the same time and to the same respondents as the larger survey. Titled Alternative Rations Systems (ARS) survey, it required respondents to "design" what for them would be the "best" and "worst" food systems and then rate those systems on a variety of scales. A copy of it is also included in Appendix B-2.

In total, the paper and pencil surveys were administered during the Pre-Test to 297 personnel (81 RIK, 95 S-COMRATS, and 121 M-COMRATS) and during the Post-Test to 245 personnel (89 RIK, 55 S-COMRATS, and 101 M-COMRATS). Of these two groups, 122 (47 RIK, 33 S-COMRATS, and 42 M-COMRATS) and 108 (39 RIK, 23 S-COMRATS, and 46 M-COMRATS), respectively, were also interviewed. The remaining persons received the survey only.

For both tests, the survey/interview sample was selected from the enlisted population and stratified according to the manpower strength of the 12 major work units at the installation. If a given work unit included 8% of the installation's enlisted work force, for example, enough personnel were chosen from the unit to comprise 8% of the sample.⁹ A letter was sent to the commander of each work unit two weeks before the test specifying the needed number of personnel and requesting that they include RIK, S-COMRATS, and M-COMRATS category respondents.

Interviews were conducted at the participants' work sites. Groups of five to ten respondents were gathered and initially given the survey to complete. Subsequently, members were taken individually to a different area, where they were interviewed by one of the two staff members. As a group, they were given a brief introduction, told about the survey/interview procedure, instructed on some of the more complex items on the survey, cautioned to work by themselves, and told to feel free to ask questions in the event of any uncertainty. In the instructions

⁹Radloff, R., R. Helmreich. Electronic data collection in field research. American Psychologist, 1969, 24, 300-303.

the respondents were told to answer only those questions that they could and to leave blank items for which they had insufficient familiarity with the dining facility to answer knowledgeably. The survey and the interview typically required approximately 45 and 15 minutes, respectively, to complete.

During both the Pre- and Post-Test, personnel receiving only the paper and pencil surveys attended one of two group sessions in an auxiliary area of the dining facility. They received much the same instructions as the interviewees, except, of course, those pertaining to the interview procedure.

Worker Interviews and Surveys

Surveys and interviews were administered to as many dining facility military food service workers as were available. In the Pre-Test phase, 30 military workers were surveyed/interviewed during the same week that the customer work was being performed. In the Post-Test phase, 25 military workers were surveyed/interviewed in mid-May, two and a half months after the implementation of CASH/A La Carte. Most of the workers (22 individuals) were surveyed/interviewed during both phases.

Survey

The survey was administered in both the Pre- and Post-Test phases to individual workers by a Behavioral Sciences Division staff member. (See Appendix C for a copy of the survey form.) In both instances, data were collected first concerning demographic characteristics of the workers which might affect job satisfaction: rank or grade level, age, time in food service, and attitude toward the military service (military personnel only). Next workers were given the Job Description Index (JDI) (Smith, Kendall, & Hulin, 1969),¹⁰ a standard pencil and paper instrument which measures satisfaction in five areas (the work itself, the supervision, the co-workers, the opportunities for promotion, and the pay). Each area is evaluated by positive, negative, or neutral responses to a list of adjectives or descriptive phrases (18 words and phrases each for work, supervision, and co-workers; 9 each for pay, and promotions).¹¹

¹⁰ Smith, P.C., L.M. Kendall, & C.L. Hulin. The measurement of satisfaction in work and retirement, Chicago: Rand McNally & Co., 1969.

¹¹ Ibid.

The JDI has been used in previous studies of military food service workers.¹²

Interview

Two different individual interviews were conducted, one in both the Pre- and Post-Tests, and a second in only the Post-Test. The former dealt with workers' opinions of the advantages and disadvantages of CASH/A La Carte compared to the traditional military food service system. The Pre-Test workers were asked to speculate about the new system, while Post-Test workers were asked to comment from experience.

In the second interview, Post-Test respondents were asked about their perception of the effects of CASH/A La Carte on consumer satisfaction, an approach somewhat different from the usual procedure of limiting questions to the worker's own role in the system (e.g., Symington, & Meiselman, 1975.).¹³

RESULTS

The findings are presented in two sections, the first describing the interviews and surveys of the dining hall consumers, and the second describing those of the food service workers. In both, the results of statistical analyses are indicated by a number in parentheses, e.g. (1), which is keyed to the corresponding number listed in Appendix D (and should not be confused with superscripted footnote notation not in parentheses).

Results of Consumer Interviews and Surveys

Demographic Characteristics

There were significant differences among the three groups (RIK, S-COMRATS, and M-COMRATS) in age, time in service, and grade,

¹² Symington, L.E. & H.L. Meiselman. The food service workers and the Travis Air Force Base experimental food system: Worker opinions and job satisfaction. U.S. Army Natick Development Center Technical Report, #75-94-FSI, 1975.

¹³ Ibid.

shown in Table 1, when the Pre- and Post-CASH/A La Carte samples were considered together (1, 2, and 3, respectively). Married personnel on COMRATS tend to be older, higher in grade, and to have been in the Navy longer than, respectively, single personnel on COMRATS and RIK personnel. There were also significant increases in age, time in service, and grade from Pre- to Post-CASH/A La Carte samples (4, 5, and 6 respectively), primarily attributable to increases within the younger RIK and S-COMRATS groups. Perhaps related to this increase in grade among the younger seamen, or perhaps for reasons of greater job satisfaction (to which CASH/A La Carte could conceivably have contributed), there was a significant increase in subjective re-enlistment probability (7) from Pre- to Post- CASH/A La Carte across all three status groups. The M-COMRATS group indicated that they were the most likely group to re-enlist, followed by the S-COMRATS group and then by the RIK group (8), but even the S-COMRATS and RIK groups switched from "probably no" as a response to the re-enlistment question to at least "undecided" during the interim between Pre- and Post-CASH/A La Carte. When asked how they felt about military service, however, there were no significant changes between Pre- and Post-CASH/A La Carte samplings, although the separation among status groups was significant (9), M-COMRATS generally liking the service "a little", followed by S-COMRATS and by RIKs, who were "neutral" in their feelings. There were no other significant demographic differences either among the status groups or between Pre- and Post-CASH/A La Carte sampling sessions on any of the other demographic variables-- including race, sex, location and type of quarters, level of education, service (Navy or Marine), or number of other installation dining halls regularly patronized.

Current Eating Habits

Respondents were asked for the number of respective breakfasts, lunches, and dinners that they ate during a "typical" seven-day week, differentiating weekends from weekdays, first in general, regardless of eating place, and then for only those meals actually eaten in the dining hall. Although eating habits in general were no different among the status groups, nor did they differ between the Pre- and Post-CASH/A La Carte samples, all groups reported eating dinner most frequently, followed by lunch, and then by an after-dinner snack, leaving breakfast the least frequently eaten meal (10). This typical pattern was generally true of both weekday and weekend meals, although significantly fewer meals of all kinds were reportedly eaten by all groups and samples of respondents on weekends than on weekdays (11), especially dinners (12).

Table 1
 Demographic Characteristics of RIK, S-COMRATS, and M-COMRATS Group Samples Before and After
 CASH/A La Carte*

	BEFORE			AFTER		
	RIK	S-COMRATS	M-COMRATS	RIK	S-COMRATS	M-COMRATS
Mean Age (in years)	20.26 (20.84)	24.58 (24.00)	29.45 (29.57)	23.10 (21.00)	26.02 (26.68)	29.79 (29.62)
Mean Time in Service (in years)	2.44 (2.21)	5.30 (5.09)	9.35 (9.85)	3.75 (2.43)	6.08 (7.36)	10.07 (9.65)
Median Grade	E-3	E-4	E-5	E-4	E-5	E-5

*Survey data are shown above in each column and interview data are shown
 below in parentheses.

Table 2 shows the number of meals eaten in the dining hall by each ration status group conditionalized upon the total number of meals eaten in general, regardless of eating place, for each respective group both before and after CASH/A La Carte.

Table 2

Proportion of Total Weekly Meals per Ration Group
Eaten in the Dining Hall During a "Typical"
Week Before and After CASH/A La Carte

	<u>RIK</u>	<u>S-COMRATS</u>	<u>M-COMRATS</u>	<u>\bar{X}</u>
Before	.59	.20	.07	.23
After	.30	.19	.07	.17
\bar{X}	.43	.20	.07	.20

The significant interaction of the proportions thus obtained (13) indicates that even though the proportion of meals reportedly eaten by former RIKs is halved from 59% to 30% by CASH/A La Carte, they still report eating 11% more of their meals in the dining hall after CASH/A La Carte than their single counterparts on COMRATS and 23% more of their meals than the M-COMRATS group. Yet from these data, the attendance of neither COMRATS group seems appreciably affected by CASH/A La Carte, though the only difference in status at the time of Post-Testing between the former RIK and the S-COMRATS groups is the total length of time that each has been on COMRATS.

During the interview, respondents were asked where they ate most of their meals during a typical week. As shown in Table 3, the proportion of RIK respondents who said that they ate most meals in the dining hall decreased from .61 to .38 (a 23% drop) from Pre- to Post-CASH/A La Carte sampling, which is consistent with the 29% drop in dining hall meals reported by the survey sample. The bulk of this 23% drop in dining hall "business" from the RIK group seems to have been transferred to various civilian "fast food" restaurants, at which 27% of the RIKs reported eating most of their meals after CASH/A La Carte, a 25% increase over the number reported eating at such places prior to CASH/A La Carte. Within the S-COMRATS group, however, 29% of the interview respondents claimed to be eating their meals in the dining hall after CASH/A La Carte versus only 14% prior to the conversion, an increase of 15% that is not similarly reflected in the survey data. The M-COMRATS group also showed a 5% increase from Pre-

Table 3

Proportion of Each Ration Group Eating Most of Their Meals in Various Locations Before and After CASH/A La Carte

	Before			After		
	<u>RIK</u>	<u>S-COM</u>	<u>M-COM</u>	<u>RIK</u>	<u>S-COM</u>	<u>M-COM</u>
Dining Facility	.61	.14	.00	.38	.29	.05
Own Home, Barracks	.23	.53	.98	.22	.42	.95
Fast Food Outlets	.02	.09	.00	.27	.06	.00
Friend/Relative's Home	.05	.09	.00	.00	.07	.00
Other Restaurants	.09	.15	.02	.13	.16	.00

to Post-CASH/A La Carte in the number of respondents claiming to eat most of their meals in the dining halls. Another question in the Post-CASH/A La Carte interview asked the respondents quite directly whether they had been eating "more often", "less often", or "about the same" in the dining hall since CASH/A La Carte. As shown in Table 4, 23% more RIK's report eating "less often" than report an increase in attendance, which is consistent with the other measures, but 27% more S-COMRATS and 21% more M-COMRATS report an increase in attendance than report a decrease, corroborating the earlier interview question on attendance.

Table 4

Proportion of Each Ration Group Eating More Often, Less Often, or About the Same in the Dining Hall Since CASH/A La Carte

	<u>More Often</u>	<u>Less Often</u>	<u>About the Same</u>
RIK	.21	.44	.35
S-COMRATS	.36	.09	.55
M-COMRATS	.28	.07	.65

The data on eating habits reported here is based on self-report measures that rely on the memory of the respondents. Past data collected at Shaw Air Force Base, South Carolina, by the Behavioral Sciences Division seriously compromises the validity of such self-report measures (Siebold, 1976; Siebold & Meiselman, 1974).^{14,15} At Shaw, airmen were asked about their frequency of attendance at the dining hall for each meal using a survey/interview procedure very similar to that reported here. The actual attendance of each was, however, known quite precisely, since accurate records were kept by the "cashier", not only of the attendance of each individual, but also of the constituents of each meal that he ate. When self-report measures were compared with actual fact, airmen were found to consistently overestimate their own attendance rate at every meal attended once or more by each. Airmen who had not attended a meal at all during the test period were the only ones for whom the self-report was at all accurate. These data on current eating habits should therefore be regarded as only a very rough estimate.

More recent data collected by the Behavioral Sciences Division seem to indicate that one way of minimizing this tendency toward overestimation on the part of subjects is to ask each subject to recall the specific location of each meal eaten from the most recent meal backwards for the duration of the test period. Attendance figures derived from tallying the locations specified in these mini-diaries correspond quite acceptably with actual attendance rates at the dining hall taken from the "headcount".

Attitudes Toward the CASH/A La Carte System

All three groups were rather neutral in their general attitudes toward efforts by the Navy to provide them with adequate subsistence both before and after CASH/A La Carte, although there was a significant (14) tendency for S-COMRATS respondents to be somewhat more satisfied with those efforts than the RIK and M-COMRATS groups, who tended more toward being neutral in their opinion.

Prior to CASH/A La Carte, 28% of the RIK group expressed a preference for retaining their meal cards rather than being placed on COMRATS, due to some uncertainty about the effects of the change and to apprehension over "paying for meals out of pocket;" whereas everyone in both married and single COMRATS groups preferred their COMRATS status, with the exception of one unmarried individual. Following implementation of CASH/A La Carte, however,

¹⁴
See footnote 2.

¹⁵
See footnote 3.

the preference for COMRATS became unanimous among both S-COMRATS and M-COMRATS groups, and nearly so among the previously RIK group, with only a single dissenter still preferring his meal card to COMRATS. When asked after CASH/A La Carte whether a return to the traditional meal card system would affect the likelihood of their re-enlistment, 12.5% of the former RIKs who responded said that they would be "less likely to re-enlist" if taken off COMRATS, while the remaining 87.5% did not think that their re-enlistment decision would be substantially affected by their ration status. No one indicated that return to a meal pass would make him or her "more likely to re-enlist."

Opinions were more divided over the issue of pricing style, given an all-COMRATS policy. Before CASH/A La Carte, the majority of RIKs (58%) expressed a preference for flat-rate meal pricing over item pricing (42%), the S-COMRATS split about evenly on the issue (47% for item pricing, 44% for meal pricing, and 9% who "don't care"), and the majority of M-COMRATS (60%) supported A La Carte item pricing over flat-rate meal pricing (35%, with 5% who "don't care"). Such a division could be reasonably attributed to the tendency of members of the older groups to eat less food per meal than those of the younger groups and to prefer "partial" meals (such as coffee for breakfast or salad for lunch) as a weight control measure not yet necessary for many younger sailors, which would of course reverse the economic advantage to the consumer of one pricing style versus the other.

When actually asked to justify their preferences, the predominant response from the RIK group prior to CASH/A La Carte was the belief that "meal pricing would be cheaper than item pricing" over time (32.6%), bolstered by another 14% who were worried about the absence of "free second helpings." The M-COMRATS group, on the other hand, cited "more variety to choose from" as their most frequent argument in support of item-pricing (23.7%), augmented by another 15.8% who "only wanted to pay for food taken" and another 10.5% who believed that item pricing would help "reduce food waste."

After CASH/A La Carte, 43% of the RIKs still preferred flat rate meal pricing (49% for item pricing; 8% "don't care"), a clear majority of S-COMRATS (80%) supported item pricing (20% for meal pricing), and support for item pricing among the M-COMRATS group remained about the same at 56% as it had been prior to CASH/A La Carte (34% for meal pricing; 10%, "don't care").

After CASH/A La Carte, the predominant reason cited by 43% of the RIK group for the reversal of their preferences was "not having to pay for what you don't eat," although 17% still believed that meal pricing provided "more food for the money." The largest Pre- to Post-CASH/A La Carte shift in pricing preference occurred for the S-COMRATS group, 68% of whom cited "taking and paying for only what you want to eat" and the consequent opportunity for "saving money" as the predominant reason for their shift. As with ration status, the great majority of all three groups (97% of the RIKs, 96% of the S-COMRATS, and 90% of the M-COMRATS) did not think that style of pricing would be a relevant factor in their decision to re-enlist or not.

The effects of both variables -- ration status and pricing style-- on actual dining hall attendance is difficult to determine accurately from interview data. However, when RIKs were asked prior to CASH/A La Carte to predict the effect that just being placed on COMRATS would have on their dining hall attendance, 47% thought that they would eat "less often in the dining hall," 49% did not think that their attendance would change, and only 4% thought that they would eat "more often in the dining hall." After CASH/A La Carte, 11% of the former RIKs actually reported an increase in dining hall attendance, and only 35% reported a decrease, with the remainder reporting "no change".

Similarly, all three groups were asked prior to CASH/A La Carte to predict the effect that item pricing would have on their attendance, given an all-COMRATS system, and the same question was then asked following CASH/A La Carte. Table 5 shows the proportion of each group that predicted an increase in dining hall attendance, a decrease in dining hall attendance, or no change

Table 5
Proportion of Each Ration Group Predicting an Increase, Decrease, or No Change in Attendance Due to Item Pricing Before CASH/A La Carte and the Proportion of Equivalent Groups Actually Reporting Such Changes After CASH/A La Carte

	Before CASH/A La Carte			After CASH/A La Carte		
	Increase	Decrease	No Change	Increase	Decrease	No Change
RIK	.24	.37	.39	.26	.17	.57
S-COMRATS	.32	.38	.30	.33	.07	.60
M-COMRATS	.18	.21	.61	.20	.03	.77

in attendance due to item pricing before the changeover to CASH/A La Carte and the proportion of equivalent groups that actually reported changes after the fact. The pattern of interest to note is that very nearly the same proportions in each of the three groups that predicted an increase in dining hall attendance before the fact of item pricing actually reported such an increase in attendance following implementation of item pricing. In contrast, 37%, 38%, and 20% of the three respective groups predicted a decrease in dining hall attendance due to item pricing before the fact, but only 17%, 7%, and 3% of equivalent groups actually reported such a decrease in attendance after the fact, a difference across groups of 23% who actually reported "no change" in frequency of attendance despite the pessimistic predictions of their Pre-CASH/A La Carte counterparts.

All of the survey respondents, both Pre- and Post-CASH/A La Carte, were asked in addition to fill out the "Alternative Rations System Survey," addressing three fundamental issues in military food service: Issue 1 concerns ration status and asked the respondent whether the best food system should have (a) "all individuals receiving (COMRATS)" or (b) "some receiving (COMRATS) and others receiving (RIK)"; Issue 2 asked whether the best food system should be operated by (a) "a civilian contractor" or (b) "the government;" and Issue 3 concerning pricing style asked whether the best food system should charge (a) "a fixed amount for each meal," (b) "for only the items taken," or (c) "for a 'special', 'regular', or 'short order' meal."

With one notable exception to be considered below, the pattern of responding to these three issues was remarkably consistent across all three groups for both the Pre- and Post-CASH/A La Carte measures. When averaged across all three groups for both measures, collapsing across other factors, 62.2% of the 489 personnel who responded to all three issues favored a COMRATS only policy (37.8% supporting the mixed COMRATS/RIK policy); 64.4% preferred a system operated by a civilian contractor (the remaining 35.6% favoring government operation); and 51.9% favored item pricing, with 31.3% for fixed meal pricing and the remaining 16.8% preferring special meal pricing. The most frequently occurring individual pattern of responses and therefore the "best" food service system by consensus was a COMRATS only, civilian operated, item priced system. Over a quarter of the 489 respondents (26.4%) selected that combination of the three factored issues as their

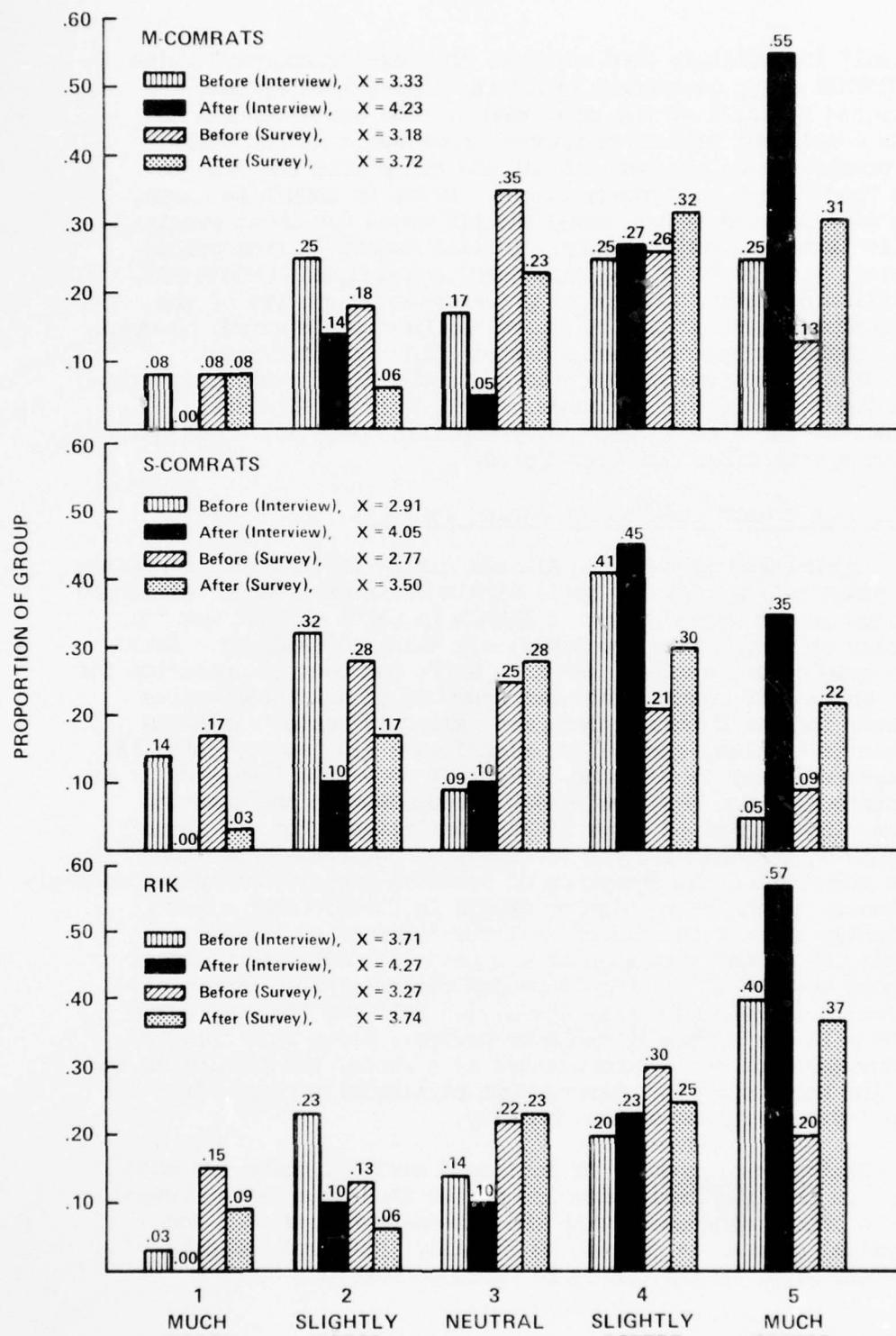
"ideal" for military food service, the next "runner-up" being a COMRATS only, government operated, item priced system, selected by 12.7% of the respondents. The one exception to this consistent pattern mentioned above was a slight shift in preference on the part of the RIK group from the Pre- to the Post-CASH/A La Carte measures. Prior to CASH/A La Carte, the most favored system among the RIK group was about evenly split between a COMRATS only, civilian operated, item priced system, with 20.7% of the responses, and a mixed COMRATS/RIK, civilian operated, fixed meal price system, with 19% of the responses. After CASH/A La Carte had been implemented, however, the COMRATS only, civilian operated, item priced system became the uncontested favorite among the RIKs as well, drawing 34.7% of the responses. (Only 6.7% of RIKs still supported the mixed COMRATS/RIK, civilian operated, fixed meal price system after CASH/A La Carte.)

Attitudes Toward the Alameda Dining Facility

When asked to rate the Alameda dining facility in comparison to other military dining halls within their experience, all three status groups agreed prior to CASH/A La Carte that it was "no better or worse" than any other, all things considered. Asked the same question after CASH/A La Carte had been in operation for two and a half months, the mean response of all three status groups indicated that Alameda was "slightly better" than the other facilities, a small but significant (15, survey data; 16, interview data) improvement. Figure 1 shows the frequency distribution for the five possible responses to the question comparing Alameda to other dining facilities. For all three groups of respondents, the frequency of negative comparisons was reduced and the frequency of positive comparisons correspondingly enhanced by the conversion to CASH/A La Carte. When asked directly whether the dining hall was "better" or "worse" after CASH/A La Carte than it was prior to CASH/A La Carte or "about the same," all but 10 people from all three groups agreed overwhelmingly that the dining hall was "better" after CASH/A La Carte than it had been before. Given this consumer endorsement of the system changes as a whole, the problem is to define those specific changes most particularly responsible for the improved rating of the facility.

A. Dining Environment. As mentioned earlier, there was some concern that the implementation of the CASH/A La Carte system would become confounded with the extensive renovations and physical changes in the dining facility that occurred only 3 weeks prior to the CASH/A La Carte conversion. Such a

FIGURE 1



confounding apparently did not occur, however, since there were no significant differences between the Pre- and Post-CASH/A La Carte samples, on the average, in their collective opinion of such features as "general dining facility environment," "monotony of same facility," "service by dining facility personnel," "desirable eating companions," "degree of military atmosphere present," "hours of operation," and "convenience of location."

There were significant differences among the three status groups in opinion over some of these features which remained relatively constant from Pre- to Post-CASH/A La Carte sampling. For example, the M-COMRATS group found the "convenience of location" to be slightly less good than the two unmarried groups (17), probably because the M-COMRATS people tend to live off base more, whereas the RIKs found the "hours of operation" to be worse than the two COMRATS group (18), but again, these differences among groups existed prior to the CASH/A La Carte system and simply continued after its implementation.

There were no significant changes of opinion either among status groups or between Pre- and Post-CASH/A La Carte samples on a host of relatively minor, though not unimportant, issues concerning the eating environment; for example, cleanliness of kitchen area, serving counters, dispensing devices, silverware, trays, dishes and glasses, table and chairs, and floors; pleasantness of interior and exterior appearance and of view; roominess; colorfulness; crowdedness; proper lighting; level of noise; number of safety hazards; proper temperature; stuffiness; presence of odors; presence of silverware and proper condiments; table and tray size; tendency to run out of items; proximity to washrooms; etc.

In fact, the major problem created by CASH/A La Carte from the consumers' point of view was an apparent increase in waiting time in the food service line from Pre- to Post-CASH/A La Carte, as indexed by a significant decline (19) in the mean rating for "speed of service or lines" from near neutral toward "moderately bad," particularly for the younger RIK and S-COMRATS groups (see Table 6). This finding of longer perceived waiting time as reported by respondents is corroborated by another section of the survey in which both RIKs (20) and S-COMRATS (21) cited "speed of service or lines" as a "major reason for nonattendance" at the dining hall significantly more often after CASH/A La Carte than they did prior to CASH/A La Carte. When actually asked to estimate the average waiting time in the serving line, the mean response from all three groups (among which there were no significant differences) increased significantly (22) from 4.50 minutes before CASH/A La Carte to 6.87 minutes after CASH/A La Carte. Estimates of total waiting time from arrival at the

Table 6

Mean Rating of "Speed of Service or Lines" in the Alameda Dining Hall for the Three Ration Groups Before and After CASH/A La Carte
(Scale Below)

Very Bad 1	Moderately Bad 2	Neither Bad Nor Good 3	Moderately Good 4	Very Good 5
	<u>RIK</u>	<u>S-COMRATS</u>	<u>M-COMRATS</u>	<u>\bar{X}</u>
Before	2.86	3.02	3.16	3.02
After	2.24	2.60	2.95	2.57

facility until the respondent was seated, ready to eat, also increased significantly (23) from a mean of 6.43 minutes before the conversion to 9.16 minutes afterward across groups.

Both before and after CASH/A La Carte there were a substantial number of complaints about the presence of Masters at Arms (MAAs) within the dining hall. Prior to CASH/A La Carte 14% of the RIKs, 32% of the S-COMRATS, and 3% of the M-COMRATS groups interviewed mentioned the presence of the MAAs as one of their primary reasons for non-attendance at the dining facility. Following implementation of CASH/A La Carte, the number of interviewees citing MAAs as a major deterrent to attendance increased slightly but nonsignificantly for two of the groups to 21% for RIKs and 13% for M-COMRATS and remained constant at 32% for the S-COMRATS group.

B. Food Features. Given the significantly more favorable rating of the dining hall after CASH/A La Carte than before, unaccompanied by any positive changes in attitude toward the dining environment, and, if anything, contradicted by the negative change in perceived waiting time, one remaining component of the food service system that could be responsible for the improvement in rating is the food itself, and that certainly seems to be the case. Table 7 shows the mean ratings of respondents broken down by status groups on two attributes of food known to be significantly important to servicemen (Branch, Meiselman, & Symington, 1974)¹⁶ -- food quality and food variety, with variety of the regular meal distinguished from that of the short order

¹⁶ See footnote 1.

Table 7
Mean Ratings of Food Quality, Regular Meal Variety, and Short-Order Variety by the Three Ration Groups Before and After CASH/A La Carte (Scale Below)*

		FOOD QUALITY					REGULAR MEAL VARIETY					SHORT ORDER VARIETY				
		Very Bad	Moderately Bad	Neither Bad Nor Good	Moderately Good	Very Good	1	2	3	4	5	1	2	3	4	5
		<u>RIK</u>	<u>S-COM</u>	<u>M-COM</u>	<u>\bar{X}</u>		<u>RIK</u>	<u>S-COM</u>	<u>M-COM</u>	<u>\bar{X}</u>		<u>RIK</u>	<u>S-COM</u>	<u>M-COM</u>	<u>\bar{X}</u>	
BEFORE		2.48 (3.20)	2.59 (2.43)	3.11 (3.00)	2.72 (2.93)		3.00 (2.86)	2.88 (2.53)	3.30 (3.29)	3.04 (2.80)		2.60 (2.80)	2.65 (3.00)	3.00 (2.75)		
AFTER		3.11 (3.50)	3.19 (3.40)	3.45 (3.50)	3.24 (3.47)		3.33 (3.15)	3.43 (3.71)	3.67 (3.54)	3.47 (3.40)		3.29 (3.43)	3.43 (3.60)	3.43 (3.43)		

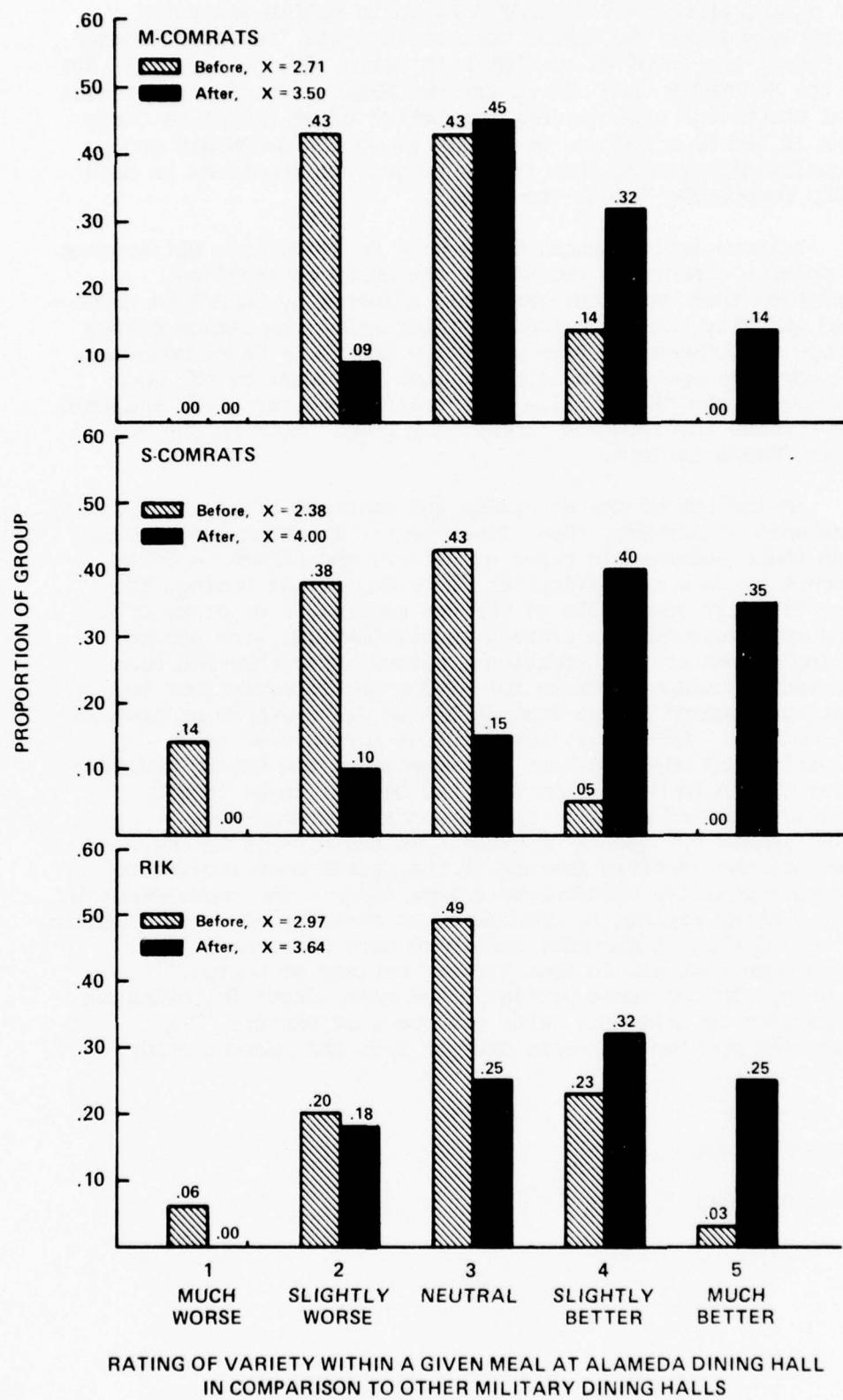
* Survey data are shown above in each column and interview data are shown below in parenthesis.

meal. Consumer opinion was significantly higher after CASH/A La Carte than before for all three food attributes—food quality (24), regular meal variety (25), and short-order meal variety (26). Another question that attempts to define "food quality" in more specific, operational terms showed a significant decline in the tendency of at least one (and sometimes two) ration status groups to attach to the food typically served in the dining hall such negative attributes as "tasteless or bland" (27 for RIK, 28 for S-COMRATS), "raw" (29 for RIK), "fatty" (30 for RIK, 31 for S-COMRATS), "full of gristle" (32 for M-COMRATS), and "stale" (33 for RIK).

When asked during the interview to compare the quality of food preparation at the Alameda facility to others within their experience, the Pre-CASH/A La Carte sample responded, on the average, that it was "neither better nor worse" than the others, whereas the Post-CASH/A La Carte sample felt that it was "somewhat better," on the average—a significant improvement (34). And when asked directly whether the quality of food preparation was "better", "worse," or "about the same" at the Alameda facility after CASH/A La Carte, 61% of the RIKs, 59% of the S-COMRATS, and 67% of the M-COMRATS respondents said that the preparation was better after CASH/A La Carte than it had been before, with only 9% of the RIKs actually disagreeing that it was worse (the remainder in each group responding "about the same").

Interview respondents were questioned about both "intrameal variety"—variety of choice within a given meal—and "intermeal variety"—the day to day turnover of the menu choices throughout the month. When the interviewees were asked to compare the turnover of selections from day to day during the course of a month at the Alameda facility to others within their experience, the Post-CASH/A La Carte sample rated the Alameda facility significantly better than did the Pre-CASH/A La Carte sample (35). And when asked directly whether the turnover of menu selections was "better," "worse," or "about the same" at the Alameda facility after CASH/A La Carte, 47% of the RIKs, 79% of the S-COMRATS, and 56% of the M-COMRATS respondents said that the menu turnover was better after CASH/A La Carte than it had been before, with 7% of the S-COMRATS and 11% of the M-COMRATS disagreeing that it was worse, and the remainder in each group responding "about the same." Similarly, when asked to compare the number of alternative choices available within any given meal at the Alameda facility to others within their experience, all three groups rated the Alameda facility more positively after the conversion to CASH/A La Carte than they did prior to the conversion, as shown in Figure 2, for a significant difference overall (36).

FIGURE 2



And again, when the Post-CASH/A La Carte sample was asked directly whether the within meal variety was "better," "worse", or "about the same" after CASH/A La Carte, 83% of the RIKs, 88% of the S-COMRATS, and 73% of the M-COMRATS respondents believed that the within meal variety was better after CASH/A La Carte than it had been before, with only 6% of the S-COMRATS group actually disagreeing that it was worse, the remainder in each group responding "about the same."

Interestingly enough, there were no systematic differences in opinion concerning two rather obviously outstanding variables that were most certainly affected by CASH/A La Carte—food quantity and its expense—either among the ration status groups or between the Pre- and Post- CASH/A La Carte measures. All three groups seemed to agree that the quantity of food service in the dining halls was "neither bad nor good" and that the expense involved was "moderately good," both before and after CASH/A La Carte.

As indices of the attitudes and opinions of dining facility consumers at Alameda, these findings are in general agreement with those obtained in prior studies of the CASH/A La Carte concept at Shaw and Loring Air Force Bases. At Loring, the more directly comparable of the two studies, a majority of consumer respondents preferred an all-COMRATS, item priced dining system to the traditional system after they had been exposed to CASH/A La Carte for a time period equivalent to that experienced by the Post-CASH/A La Carte sample at Alameda (2½ months). Similarly, consumers at Loring also held significantly more positive opinions about the dining facility after CASH/A La Carte than they had before, "even though attitudes toward specific environmental features were uninfluenced by" CASH/A La Carte. In the case of Loring, however, the specific feature of the system contributing to the more positive opinions were less clear. The improvement in food quality ratings by consumers was considerably less dramatic at Loring than at Alameda, and there were no significant improvements at all in food variety ratings at Loring.¹⁷ At Shaw, "the consumer problem cited most often" following the conversion to CASH/A La Carte was speed of service,¹⁸ a recurring problem that also emerges from the current study

¹⁷See footnote 4.

¹⁸See footnote 3.

at Alameda and may be somewhat inherent to the implementation of the CASH/A La Carte system.

Results of Worker Interviews and Surveys

Demographic Characteristics

Table 8 shows the rank of the military workers interviewed at NAS Alameda in both the Pre- and Post-Test phases. Twenty-two

Table 8

Number of Pre- and Post-Test NAS Alameda Military Food Service Workers Sampled in Each Rank Category

Sample	Rank						
	E-2	E-3	E-4	E-5	E-6	E-7	Warrant Officer
Pre-Test	2	3	11	8	4	2	0
Post-Test	2	2	7	7	4	2	1

of the 25 workers interviewed in the Post-Test had also been interviewed in the Pre-Test. Not surprisingly, therefore, the two samples had similar age ranges (19 to 41 and 19 to 42, respectively), as well as similar ranges for the length of time that each had spent in Navy food service careers (from a few months to 20 years for both groups). Their attitudes toward the military were also extremely similar, being positive on the average, with the Pre-Test group mean slightly higher (Table 9).

Table 9

Number of Pre- and Post-Test NAS Alameda Food Service Workers Expressing Stated Attitude Toward Military Service

Sample	1 Dislike Very Much	2 Dislike Moderately	3 Dislike a Little	4 Neither Like nor Dislike	5 Like a Little	6 Like Moderately	7 Very Much
	2	2	2	2	3	10	9
Post-Test	2	2	1	4	1	5	9

Pre-Test mean = 5.27; Post-Test mean = 5.13.

Job Description Index

The Job Description Index (JDI) is a standard paper and pencil instrument which measures satisfaction within five areas of a job: the work itself, the supervision, the co-workers on the job, the opportunities for promotion, and the pay (Smith et al., 1969).¹⁹ Before discussing the responses of the Pre- and Post-Test workers to this instrument, a brief explanation of the scoring should be undertaken.

Each of the five areas of the JDI is evaluated by responses to a list of words or descriptive phrases (18 words and phrases each for work, supervision, and co-workers; 9 each for pay and promotion). Figure 3 shows the format for four of the words/phrases from the work scale. The respondent circles the "Y" (yes) or "N" (no) to indicate whether or not the word/phrase describes his job.

Work

Fascinating	Y	N	?
Routine	Y	N	?
Boring	Y	N	?
Good	Y	N	?

Figure 3. Format for the Work Scale of the Job Description Index (JDI)

He circles "?" for those items which he does not understand or on which he cannot decide.

Based on a large number of respondents who were asked to describe the best and worst possible jobs for themselves, the developers of the JDI (Smith et al., 1969)²⁰ determined which response should be scored as "satisfied" for each item. For example, in Figure 3 "routine" and "boring" are scored in the satisfied direction if the individual responds, "N"; and "fascinating" and "good" are scored in the satisfied direction if he answers, "Y".

¹⁹See footnote 9.

²⁰See footnote 9.

Traditional scoring methods would probably suggest a scoring of 2 for a "satisfied" answer, 1 for a "?" answer, and 0 for a "dissatisfied" answer. Smith, however, has scored "satisfied" answers as 3, "dissatisfied" answers as 0, and "?" answers as 1. This departure from traditional methodology was based on the responses of the sample mentioned above, from which it was concluded that the "?" response was more indicative of dissatisfaction than of satisfaction. For each scale or area of the JDI, the range of possible scores is from 0 to 54, with scores on each word or phrase being summed for the work, supervision, and co-worker scales; and summed, then doubled, on the pay and promotion scales.

Table 10 shows the mean responses of the Pre- and Post-Test NAS Alameda military food service workers to the five scales of the JDI. It also provides the mean responses from a sample of military food service workers surveyed at three Air Force bases (Symington, and Meiselman, 1975)²¹ and Smith's set of norms obtained from a large non-food service, civilian sample. This latter normative sample was drawn from private business organizations of 50

Table 10

Mean Responses* to the Job Description Index (JDI) from Pre- and Post-Test Food Service Workers at NAS Alameda, Military Workers from Three Air Force Bases²² and in a Civilian, Normative Sample²³

<u>Scale</u>	<u>NAS Alameda</u>	<u>Three AFB's</u>	<u>Civilian Norms</u>
	<u>Pre-Test</u>	<u>Post-Test</u>	
<u>Co-Workers</u>	35.47	34.54	34.98
<u>Supervision</u>	31.53	29.92	38.89
<u>Work</u>	29.20	21.54	23.72
<u>Promotion</u>	24.07	19.75	25.69
<u>Pay</u>	16.60	12.75	21.26

*Scores could range from 0 (least satisfaction) to 54 (highest satisfaction)

²¹ Symington, L. E., and H. L. Meiselman. Job satisfaction and opinions of the Air Force food service workers. U.S. Army Natick Research & Development Command Technical Report, 76-11-FSL, 1975.

²² See footnote 20.

²³ See footnote 11.

or more employees and from all levels within these organizations. The companies included production plants, retail stores, banks, and research organizations, among others (Smith *et al.*, 1969).²⁴

Table 10 can be summarized with several observations. The NAS Alameda workers, both Pre- and Post-Test, expressed their highest level of satisfaction with their co-workers, followed by supervision, work, promotion, and pay in that order. Comparisons of the NAS Alameda workers' scores with the civilian norms find the NAS Alameda mean scores lower with the exception of the Pre-Test score on the promotion scale; however, note that the Air Force food service worker scores follow a similar pattern. Comparing the NAS Alameda Pre-Test scores to the Air Force scores shows two scales — co-workers and promotion — on which the means were approximately equal; two on which NAS Alameda means were lower — supervision and pay; and one — work — on which NAS Alameda workers were more satisfied.

The critical comparisons for this study, of course, are between the Pre- and Post-Test samples. On each of the five scales the Post-Test sample has a lower mean than the Pre-Test sample, indicating a lower level of satisfaction. While four of these differences are not statistically significant, the difference between the scores on the work scale does reach significance (37). This outcome is in marked contrast to the study of BAS/A La Carte at Loring AFB, where Post-Test workers had higher (though not statistically significant) JDI scores than Pre-Test workers on the work, supervision, and co-worker scales. NAS Alameda workers, then, were significantly less satisfied with their work under the CASH/A La Carte system implemented at NAS Alameda than they were with their work under the traditional system.

Interview

Several questions in the worker interviews provided responses which further amplify the dissatisfaction with CASH/A La Carte suggested by the JDI data. The Pre-Test interview centered around the workers' feelings about the proposed CASH/A La Carte system and their perceptions of what their jobs might be like under the new system. The Post-Test questions addressed the same areas in terms of the workers' actual experiences.

Table 11 presents the workers' responses to questions asking whether their jobs were (would be) "better," "worse," or "about the same" under the CASH/A La Carte system. Whereas half the Pre-Test workers anticipated a positive effect on CASH/A La

²⁴See footnote 9.

Table 11

Percentage Response of Pre- and Post-Test NAS Alameda Workers Concerning What their Jobs Were (Would Be) Like under CASH/A La Carte

<u>Category</u>	<u>Pre-Test</u>	<u>Post-Test</u>
Much Better	17%	20%
Somewhat Better	33%	0%
About the Same	23%	36%
Somewhat Worse	17%	16%
Much Worse	7%	24%
Don't Know	3%	4%

Carte in their jobs, only 20% of the Post-Test workers felt that their jobs actually were better, and 40% felt that their jobs were worse. This more negative view of CASH/A La Carte by the Post-Test sample was statistically significant (38).

Another question asked the workers to express their preference for either the CASH/A La Carte or the traditional system. Again, Pre-Test workers were asked to speculate about the question, while the Post-Test workers were asked to respond based on their experience. Table 12 shows the responses of the Pre- and Post-Test NAS Alameda workers and, for comparison, the responses of the Post-Test Loring AFB workers.

Table 12

Percentage Responses of Pre- and Post-Test NAS Alameda and Post-Test Loring AFB Military Workers Concerning Preference for the New (CASH/A La Carte, BAS/A La Carte) vs. Old (SIK/COMRATS, RIK/BAS) System

<u>Category</u>	<u>Alameda</u>		<u>Loring</u>
	<u>Pre-Test</u> (N=30)	<u>Post-Test</u> (N=25)	<u>Post-Test</u> (N=30)
<u>Extremely Prefer New System</u>	33%	24%	63%
<u>Slightly Prefer New System</u>	10%	12%	20%
<u>No Preference</u>	17%	8%	10%
<u>Slightly Prefer Old System</u>	20%	28%	7%
<u>Extremely Prefer Old System</u>	20%	28%	0%

Note that the Pre-Test sample at NAS Alameda was fairly evenly divided in opinion of the impending shift to CASH/A La Carte, with 43% anticipating a preference for it, 17% anticipating no preference, and 40% anticipating that they would still prefer the traditional system. The Post-Test responses shifted toward the traditional system with 56% of the workers preferring it, 36% preferring CASH/A La Carte, and 8% stating no preference. While this shift was not statistically significant (39), it does result in more than half of the workers not preferring CASH/A La Carte. This non-positive evaluation of CASH/A La Carte by the Post-Test NAS Alameda workers is again in strong contrast to the very positive response of the Loring workers, where 83% of the workers preferred BAS/A La Carte and only 7% preferred the traditional system. This difference between the Alameda and the Loring Post-Test samples is statistically significant (40).

An interesting observation can be made about the Post-Test Alameda workers who "extremely preferred" CASH/A La Carte. Five of the six could be considered "supervisors" (food service officer, leading MS, galley captain, or watch captain); and only one "supervisor" preferred the traditional system. Thus, unlike Loring AFB, where "supervisors" and "workers" equally preferred BAS/A La Carte, the NAS Alameda "supervisors," as a group, were in favor of CASH/A La Carte, whereas the "workers" were, in general, opposed to it.

Some of the answers to open-ended questions in the Post-Test interview provide some clues to reasons for the negative attitude of the workers. In answer to what was bad about CASH/A La Carte the most frequent response concerned the number of hours that were spent on the job (60% of the workers responding). Two comments are appropriate concerning working hours. First, the workers themselves chose the on-duty/off-duty arrangement of their schedules. Secondly, whether justified or not, there was a strong feeling among the workers that, to some extent, shore duty is supposed to be a relatively easy tour to compensate for the rigorous hours spent at sea by the MS rate. Whether this perception accurately reflects policy is irrelevant as long as the workers feel they are entitled to a "relaxed" tour. This perception partially explains the large number of workers who objected to the hours and probably was a factor contributing to the second most frequent criticism of CASH/A La Carte: that there was too much work to do, and/or not enough people to do it (56%).

Other categories being volunteered by at least three workers included not liking the special meals for seamen and their guests (16%), too much paperwork (16%), customer complaints about portion size (16%), and customer complaints about cost (12%).

In response to a question asking what was good about CASH/A La Carte, the most common response concerned the variety offered the customer (44%). Other positive comments included the perception that the food was better because of the smaller quantities and progressive cookery (28%), that there was less waste (24%), that there was better financial control (16%), and that the customer had to pay only for what he ate (12%).

The Pre-Test and Post-Test samples were also asked if their job would be (was) "easier" or "harder" under CASH/A La Carte. As can be seen in Table 13, the responses followed a familiar pattern, with Pre-Test responses balanced around neutral and Post-Test responses shifting toward the negative, although this indication that workers perceived their job as being harder under CASH/A La Carte was not statistically significant (41). When asked why the job was harder, the most common responses made by the Post-Test sample again concerned the hours and the workload. It is

Table 13

Percentage Responses of NAS Alameda Food Service Workers Concerning the Ease of Their Jobs Under CASH/A La Carte

<u>Category</u>	<u>Pre-Test</u>	<u>Post-Test</u>
<u>Much Easier</u>	10%	8%
<u>Somewhat Easier</u>	20%	8%
<u>About the Same</u>	33%	20%
<u>Somewhat Harder</u>	17%	36%
<u>Much Harder</u>	20%	28%

interesting to note that the Loring workers also felt that their job was harder. They, however, claimed not to mind, since under the new system they were being used to cook; whereas under the traditional system many had been used in cleaning/serving tasks, while civilian wage grade cooks did most of the cooking. At NAS Alameda, however, there were no civilian cooks; the Navy food service workers had also done the cooking under the traditional system. For the Alameda workers, then, the change to CASH/A La Carte had not "made them cooks" as it had reportedly done for many at Loring AFB.

Recall that 28% of the Post-Test cooks volunteered smaller food quantities and progressive cookery in answer to an open-ended question concerning what was good about CASH/A La Carte. Later in the interview this sample of workers was directly asked whether the food in the dining facility was "better" or "worse" than before the change. One respondent (4%) said that it was worse, five (20%) said that it was about the same, sixteen (64%) maintained that the food was better, and three (12%) declined to give an opinion. When asked in an open-ended format why it was better, 12 of the 16 cited smaller quantity cooking, with 3 of these also citing progressive cookery, thereby corroborating the data reported earlier.

CONCLUSIONS

1. Enlisted consumer attitudes toward the Alameda dining facility were significantly more favorable after the CASH/A La Carte system had been implemented than they were prior to CASH/A La Carte.
2. The two primary features of the CASH/A La Carte system -- an all-COMRATS policy and item pricing -- were preferred to the alternative choices of a mixed COMRATS/RIK policy and flat-rate meal or "special" meal pricing by a majority of respondents.
3. Improved food quality and greater meal variety, both for "regular" and for "short-order" type meals appeared to be the most salient features of the food service system contributing to the positive change in consumer attitudes toward the facility.
4. The extensive physical renovations of the dining facility appeared to have relatively little impact upon the attitudes and/or opinions of the consumers, indicating either:
 - a. That the consumers had indeed assimilated the new decor sufficiently during the 3 weeks prior to the Pre-CASH/A La Carte attitude measures to include their feelings about it in that prior measure; or
 - b. That the physical features of the dining environment are of relatively little importance to the consumer in comparison to the food features found to be more salient.
5. One problem created by CASH/A La Carte was an apparent increase in waiting time in the food service line from Pre- to Post-CASH/A La Carte measures, indexed by significantly more negative ratings from the Post-CASH/A La Carte respondents than from the Pre-CASH/A La Carte sample. The negative effect of increased waiting time was apparently more than offset by the positive effects of improved food quality and variety, however, since attitudes overall were more favorable in spite of the increased waiting time.
6. Although the NAS Alameda military food service worker Pre-Test sample seemed to have a relatively neutral view of the imminent CASH/A La Carte system when asked to speculate about it, the views of the Post-Test sample shifted toward the negative. Their Job Description Index rating of their work was significantly lower than ratings by the Pre-Test sample of their work.

Of the Post-Test sample, 40% rated their job under CASH/A La Carte as somewhat or much worse than their job under the traditional system, while only 20% rated it better; 56% preferred the traditional system to CASH/A La Carte, while 36% preferred the latter; and 64% found their job to be harder under CASH/A La Carte, while only 16% saw it as easier.

- a. These findings are in sharp contrast to the opinions of military food service workers experiencing BAS/A La Carte at Loring AFB, who strongly preferred the new system.
- b. Another difference between the Alameda and Loring data was the split between Alameda "supervisors" and "workers," with the former, in general, preferring the CASH/A La Carte and the latter preferring the traditional system. At Loring the new system was generally preferred by both.
7. The main complaint of the Alameda Post-Test worker concerning CASH/A La Carte dealt with his perception of long working hours and a heavy workload. This seemed to be a particular burden since the workers rightly or wrongly claimed to anticipate "easy" shore assignments in compensation for rigorous sea duty.
8. While some Loring AFB workers claimed to like BAS/A La Carte because it gave them an opportunity to cook instead of clean/serve, this was not true for the NAS Alameda military workers who had also cooked under the traditional system.
9. Some of the NAS Alameda workers also complained about the special meals, paperwork, and customer dissatisfaction with portion size and cost.
10. The Post-Test workers did perceive some positive aspects of CASH/A La Carte, citing the increased variety offered the customer, improved food quality, and a reduction in plate waste.

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APPENDIX A

Consumer Interview Protocols

INTERVIEW PROTOCOL FOR PRE-TEST II AT NAS ALAMEDA

1. Are you currently receiving COMRATS? (no=0; yes=1)
2. Unit
3. Age (to the nearest year)
4. Time in service (to the nearest year)
- 0-10 5. Are you planning to make a career of the military?
(no=0; yes=1; uncertain=0)
6. Are you married and currently living with your spouse?
(no=0; yes=1)

7. How many meals do you eat during a typical week, Monday through Sunday, regardless of where you eat them?
8. During a typical week, where do you eat most of these meals?
9. Are there any other places where you typically eat more than one meal a week? (If not, enter a Z.)
10. How many meals do you eat in the dining hall during a typical week?
11. How many meals have you eaten in the dining hall during the last two weeks?
- 12* How many of these have been short order-type meals?
- 13* How much money do you typically pay for a noon day meal?
- 14* How long do you typically have to wait from the time that you enter the dining hall to the time that you sit down at a table?
(in minutes)
15. Do you eat any more or less often toward the end of a pay period than at the beginning of the period? (no=0; less=1; more=2).

*Ask only of those who have eaten in the dining hall during the last two weeks. Emphasize that their answers should be based only on these two weeks.

16. Is the amount of money you pay for a meal any more or less toward the end of a pay period than at the beginning of the period? (no=0; less=1; more=2).

17. Do you eat in the dining hall any more or less toward the end of a pay period than at the beginning of the period? (no=0; less=1; more=2).

18. Are there any other food habits which change over the pay period? (If not, enter a Z).

19. When you came in the Navy, you made a contract with the government in which they agreed to provide you with subsistence. How satisfied are you with their effort to fulfill this agreement? Please use this chart to answer. (A)

20. If you could change any one thing in how the Navy runs its food system, what would it be?

21. What is the main reason you don't eat in the dining hall more often?

22. If this were changed, would you eat in the dining hall more often? (no=0; yes=1).

1 23. Are there any other things which could be done to get you to eat more meals in the dining hall? (no=0; yes=1).

1 24. What is that?

0 25. Is there anything which could be done to get you to eat in the dining hall more often? (no=0; yes=1).

1 26. What is that?

27* How would you rate this dining hall in comparison to other ones you've seen? Please use this chart to answer. (B)

28* How would you rate the preparation of food in this dining hall in comparison to other dining halls you've eaten in? Please use this chart to answer. (B)

29* How would you rate the number of different foods available at a given meal in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer. (B)

30* How would you rate the variety of foods offered day after day in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer. (B)

31. Do you know what the current daily COMRATS rate is? (no=0; yes=1).

1 32. What is it?

33. Is \$2.53 per day enough for you to eat adequately on a typical day? Please use this chart to answer. (C)

1,2,4,5 34. According to your present eating habits, how much money would you need to eat adequately on a typical day?

35. Have you heard about any changes in the food system here at Alameda which are planned for the near future? (no=0; yes=1).

1 36. What have you heard?

37. Would you prefer to remain on (go on to) COMRATS or to go on to (remain on) RIK, where you are authorized to eat in the dining hall for free? (COMRATS=0, RIK=1).

1 38. Why?

39. Would you support a policy which would place all seamen on COMRATS? (no=0; yes=1; don't care=2).

0 40. Why not?

RIK's 41. If you were on COMRATS, would you eat in the dining hall any more or less often than you do now? (no=0; less=1; more=2).

42. Would you prefer the present system in the dining hall where you pay a flat single price for the entire meal or a system where you would pay for the things you took? You can assume that a "normal" meal would cost the same under both systems. (item=0; meal=1; no preference=2).

43. Why?

44. (Assuming you were on COMRATS) Would you eat in the dining hall any more or less often than you do now if pricing was by the item rather than by the meal? Again you may assume that a "normal" meal would cost the same under both systems. (no=0; less=1; more=2).

45* Do you think you would eat in the dining hall any differently than you do now if pricing was by the item rather than by the meal? (no=0; yes=1; don't know=2).

1 46* What do you think would change?

Note: An X should be entered any time a question is not asked. If a question is asked and, for whatever reason, not answered, a Z should be entered.

INTERVIEW PROTOCOL FOR POST-TEST AT NAS ALAMEDA

1. Unit
2. How long have you been stationed at NAS Alameda? (Pre-CASH/A La Carte, 1 March 76 =0; Post CASH/A La Carte = 1).
 - 0 3. Have we talked to you before or have you previously taken our written survey about the dining hall? (no=0; interview=1, survey=2, both=3).
4. Were you receiving separate rations before coming to Alameda? (...before they instituted the new CASH/A La Carte system?) (no=0; yes=1).
5. How old are you? (Round to the nearest year.)
6. How long have you been in the Navy? (Round to the nearest year.)
 - 0-10 7. Are you planning to make a career of the military? (no=0, yes=1, uncertain=2).
8. Are you married and currently living with your spouse? (no=0, yes=1).

9. During a typical week, where do you eat most of your meals?
10. Are there any other places where you typically eat at least one meal a week? (If not, enter a Z.)
 - *11. Do you eat any meals in the dining hall during a typical week? (no=0; yes=1).
 - *12. Have you eaten in the dining hall since 1 March when they started this new CASH/A La Carte system? (no=0, yes=1).
13. Concerning the dining hall, are you eating there any more or less often since they went to this new CASH/A La Carte system? Please use this chart to answer. (A)
- 1,2/3,4 14. That means there must be someplace where you're eating less (more) often than before. Where is that?

*These should be asked only when the information has not been provided in response to a previous question. If it has, enter the appropriate information automatically.

1,2/3,4 15. What is it about the new system that caused you to go less (more) often?

16. Would you prefer to remain on COMRATS or to have a meal pass where you could eat in the dining hall for free? (COMBATS=0, RIK=1).

1 17. Why?

RIK* 18. Has being on COMRATS caused you to eat in the dining hall any more or less often than before? (no=0; less=1; more=2).

RIK 19. If you were taken off COMRATS, would you be any more or less likely to reenlist than you are now? (no=0; less=1; more=2).

20. Do you support, oppose, or don't care about this policy of having everyone on COMRATS? (oppose=0; support=1; don't care=2).

0 21. Why?

22. Would you prefer to keep this new item-pricing system where you pay for the foods you take or to go back to the meal-pricing system where you paid a flat price for the whole meal, or don't you care? (item=0; meal=1; don't care=2).

0,1 23. Why?

* 24. Has this item-pricing system caused you to eat in the dining hall any more or less often than before? (no=0; less=1; more=2).

25. If they reverted to meal-pricing, would you be any more or less likely to reenlist than you are now? (no=0; less=1; more=2).

26. Do you eat any differently in the dining hall now in comparison to before item-pricing began, e.g., has the amount of food you eat changed or have the types of foods you eat changed? (no=0, yes=1).

1 27. What has changed

28. When you came in the Navy, you made a contract with the government in which they agreed to provide you with subsistence. How satisfied are you with their effort to fulfill this agreement? Please use this chart to answer. (B)

29. What is the main reason you don't eat in the dining hall more often?

30. If this were changed, would you eat in the dining hall more often? (no=0; yes=2).

1 31. Are there any other things which could be done to get you to eat more meals in the dining hall? (no=0; yes=1).

1 32. What is that?

0 33. Is there anything which could be done to get you to eat in the dining hall more often? (no=0; yes=1).

1 34. What is that?

35. If they had a number of dining halls spread over the station, instead of one main one, would you eat in a dining hall more often than you do now? (no=0; yes=1).

36** How would you rate this dining hall in comparison to other ones you've seen? Please use this chart to answer. (C)

37*** Is it any better or worse now than before CASH/A La Carte? (no=0; worse=1; better=2).

1,2 38. What is better (worse) about it?

39** How would you rate the preparation of food in this dining hall in comparison to other dining halls you've eaten in? Please use this chart to answer. (C)

40*** Is it any better or worse now than before CASH/A La Carte? (no=0; worse=1; better=2).

** Ask only of those persons who have eaten in dining hall since 1 March.

*** Ask only of those who have been at Alameda prior to 1 March and also have eaten in dining hall.

41** How would you rate the number of different foods available at a given meal in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer. (C)

42*** Is it any better or worse now than before CASH/A La Carte? (no=0; worse=1, better=2).

43** How would you rate the variety of foods offered day after day in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer. (C)

44*** Is it any better or worse now than before CASH/A La Carte? (no=0; worse=1, better=2).

45** How long do you typically have to wait from the time that you enter the dining hall until the time that you sit down at a table? (In minutes)

46*** Has this time increased or decreased because of CASH/A La Carte? (no=0, increased=1; decreased=2).

1,2 47. Why?

48*** Sometimes in a dining hall, a food that you are expecting to be available is not, because the cooks weren't following the menu or perhaps because it ran out. Has this been happening any more or less because of CASH/A La Carte? (no=0; more=1; less=2).

1,2 49. Why?

50** How much do you spend for a typical noon meal in the dining hall?

COMRATS 51*** Generally speaking, are you paying any more or less for meals in the dining hall now than before CASH/A La Carte? (no=0, more=1, less=2).

52. Do you know what the current daily or monthly COMRATS rate is?

53. Is \$2.53 per day enough for you to eat adequately on a typical day? Please use this chart to answer. (D)

1,2,4,5 54. According to your present eating habits, how much money would you need to eat adequately on a typical day?

55. Do you eat any more or less often toward the end of the pay period than at the beginning of the period? (no=0; less=1; more=2).

56. Is the amount of money you pay for a meal any more or less toward the end of a pay period than at the beginning of the period? (no=0; less=1; more=2).

57. Do you eat in the dining hall any more or less often toward the end of a pay period than at the beginning of the period? (no=0; less=1; more=2).

58. Are there any other food habits which change over the pay period? (If not, enter a Z).

Note: An X should be entered any time a question is not asked. If a question is asked and, for whatever reason, not answered, a Z should be entered.

APPENDIX B-1

Consumer's Opinions of Food Service Systems

CONSUMER'S OPINIONS OF FOOD SERVICE SYSTEMS

U. S. ARMY NATICK LABORATORIES

NOVEMBER 1974

Booklet Serial Number

In the grid to your right, please fill in
the ovals corresponding with the Booklet
Serial Number that is stamped directly
above the numeric grid.

0	9	2	5
1	7	1	1
3	8	7	2
4	5	3	3
5	4	4	4
6	3	5	5
6	6	6	6
7	7	7	7
8	8	8	6
9	9	9	9

Instructions for all questions: For each question completely darken the circle around the number of your answer. Certain questions have specific instructions associated with them. Please read these instructions carefully.

1. INSTALLATION CODE (To be supplied by testers.)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

2. DINING FACILITY CODE (To be supplied by testers.)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

3. Darken the appropriate circles which indicate your AGE at last birthday.

1st digit 0 1 2 3 4 5 6 7 8 9

2nd digit 0 1 2 3 4 5 6 7 8 9

4. Darken the circle which indicates your RACE.

- Caucasian/White
- Negro/Black
- Oriental
- Other (specify _____)

5. Darken the circle which indicates your SEX.

- Male
- Female

6. Darken the circle which indicates your MARRIAGE STATUS.

- Married
- Single, Divorced, or Separated

7. Darken the circle which indicates WHERE YOU LIVE.

- On post bachelor quarters
- On post family quarters
- Off post bachelor quarters
- Off post family quarters

8. Darken the circle which indicates your HIGHEST LEVEL OF EDUCATION.

- Finished Grade School
- High School Graduate (includes GED)
- Skilled Job Training After High School
- Some College
- College Graduate

9. Darken the circle which indicates your SERVICE.

- Air Force
- Army
- Marines
- Navy

10. How long have you been IN MILITARY SERVICE? Darken one circle in each line.

years 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
0 0

and months 0 1 2 3 4 5 6 7 8 9 10 11
0 0 0 0 0 0 0 0 0 0 0 0

11. At how many installations (besides this one) have you been assigned where you ate regularly in the installation dining hall?

0 1 2-4 5-7 8 or more

12. Do you plan to REENLIST when your present enlistment ends? Darken the appropriate circle.

Definitely yes
 Probably yes
 Undecided
 Probably no
 Definitely no
 No, retiring

13. What are your FEELINGS ABOUT THE MILITARY SERVICE? Darken the appropriate circle.

Dislike very much	Dislike moderately	Dislike a little	Neutral	Like a little	Like moderately	Like very much
<input type="radio"/>						

14. Where were you raised? Darken the appropriate circle.

In the country
 In a town or small city with less than 25,000 people
 In a city with more than 25,000, but less than 100,000 people
 In a large city with more than 100,000, but less than one million people
 In a very large city with over one million people
 In a suburb of a large or very large city

15. In what STATE were you raised? Darken the appropriate circle.

<input type="radio"/> 01 Alabama	<input type="radio"/> 28 Nevada
<input type="radio"/> 02 Alaska	<input type="radio"/> 29 New Hampshire
<input type="radio"/> 03 Arizona	<input type="radio"/> 30 New Jersey
<input type="radio"/> 04 Arkansas	<input type="radio"/> 31 New Mexico
<input type="radio"/> 05 California	<input type="radio"/> 32 New York
<input type="radio"/> 06 Colorado	<input type="radio"/> 33 North Carolina
<input type="radio"/> 07 Connecticut	<input type="radio"/> 34 North Dakota
<input type="radio"/> 08 Delaware	<input type="radio"/> 35 Ohio
<input type="radio"/> 09 Florida	<input type="radio"/> 36 Oklahoma
<input type="radio"/> 10 Georgia	<input type="radio"/> 37 Oregon
<input type="radio"/> 11 Hawaii	<input type="radio"/> 38 Pennsylvania
<input type="radio"/> 12 Idaho	<input type="radio"/> 39 Rhode Island
<input type="radio"/> 13 Illinois	<input type="radio"/> 40 South Carolina
<input type="radio"/> 14 Indiana	<input type="radio"/> 41 South Dakota
<input type="radio"/> 15 Iowa	<input type="radio"/> 42 Tennessee
<input type="radio"/> 16 Kansas	<input type="radio"/> 43 Texas
<input type="radio"/> 17 Kentucky	<input type="radio"/> 44 Utah
<input type="radio"/> 18 Louisiana	<input type="radio"/> 45 Vermont
<input type="radio"/> 19 Maine	<input type="radio"/> 46 Virginia
<input type="radio"/> 20 Maryland	<input type="radio"/> 47 Washington
<input type="radio"/> 21 Massachusetts	<input type="radio"/> 48 West Virginia
<input type="radio"/> 22 Michigan	<input type="radio"/> 49 Wisconsin
<input type="radio"/> 23 Minnesota	<input type="radio"/> 50 Wyoming
<input type="radio"/> 24 Mississippi	<input type="radio"/> 51 Washington, D.C.
<input type="radio"/> 25 Missouri	<input type="radio"/> 52 Other U.S. territories or possessions (For example, Puerto Rico or Virgin Islands.)
<input type="radio"/> 26 Montana	<input type="radio"/> 53 Outside the U.S. or U.S. Territories or possessions.
<input type="radio"/> 27 Nebraska	

16. Darken the circle which indicates your PRESENT GRADE.

- E-1
- E-2
- E-3
- E-4
- E-5
- E-6
- E-7
- E-8
- E-9
- Officer

17. Do you receive a SEPARATE RATIONS ALLOWANCE (money instead of free meals)?

Darken the appropriate circle.

- Yes
- No

18. What ONE TYPE OF COOKING were you raised on? Darken the appropriate circle.

<input type="radio"/> 01 Chinese	<input type="radio"/> 09 Jewish
<input type="radio"/> 02 English	<input type="radio"/> 10 Mexican
<input type="radio"/> 03 French	<input type="radio"/> 11 New England
<input type="radio"/> 04 General American Style	<input type="radio"/> 12 Polish (& Eastern Europe)
<input type="radio"/> 05 German	<input type="radio"/> 13 Soul
<input type="radio"/> 06 Greek	<input type="radio"/> 14 Southern
<input type="radio"/> 07 Italian	<input type="radio"/> 15 Spanish (not Mexican)
<input type="radio"/> 08 Japanese	<input type="radio"/> 16 Other (please specify _____)

19. What TYPE OF COOKING OR SPECIALTY FOODS do you like best? Please darken the circles of your TOP THREE CHOICES.

<input type="radio"/> 01 Chinese	<input type="radio"/> 09 Jewish
<input type="radio"/> 02 English	<input type="radio"/> 10 Mexican
<input type="radio"/> 03 French	<input type="radio"/> 11 New England
<input type="radio"/> 04 General American Style	<input type="radio"/> 12 Polish (& Eastern Europe)
<input type="radio"/> 05 German	<input type="radio"/> 13 Soul
<input type="radio"/> 06 Greek	<input type="radio"/> 14 Southern
<input type="radio"/> 07 Italian	<input type="radio"/> 15 Spanish (not Mexican)
<input type="radio"/> 08 Japanese	<input type="radio"/> 16 Seafood
	<input type="radio"/> 17 Other (please specify _____)

20. HOW MANY MEALS DO YOU EAT DURING A TYPICAL WEEK, REGARDLESS OF WHERE YOU EAT THEM? For each meal darken TWO circles, one to indicate how often you have that meal during typical weekdays (Monday through Friday) AND a second to indicate how often you have that meal during a typical weekend (Saturday and Sunday).

	Weekdays					Weekend	
	1	2	3	4	5	1	2
Breakfast	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>				
Mid-day Meal	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>				
Evening Meal	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>				
After Evening	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>				

21. HOW MANY MEALS DO YOU EAT AT YOUR DINING FACILITY DURING A TYPICAL WEEK?
 For each meal darken TWO circles, one to indicate how often you have that meal during typical weekdays (Monday through Friday) AND a second to indicate how often you have that meal during a typical weekend (Saturday and Sunday).

	Weekdays					Weekend	
	1	2	3	4	5	1	2
Breakfast	<input checked="" type="radio"/>						
Mid-day Meal	<input checked="" type="radio"/>						
Evening Meal	<input checked="" type="radio"/>						
After Evening	<input checked="" type="radio"/>						

22. WHERE DO YOU EAT when you do not eat in the military dining facility? Indicate how often by filling in one circle in each line.

	Never	Less than once a week	1-3 times a week	4-7 times a week	8-14 times a week	15 or more times a week
a. Private residence (girlfriend's house, friend's or relative's house, your home, your barracks, bringing your food, etc.)	<input type="radio"/>					
b. Other installation facility (NCO Club, the exchange, etc.)	<input type="radio"/>					
c. Diner, snack bar, pizza parlor, or drive-in off the installation (or having it delivered)	<input type="radio"/>					
d. Bar or tavern (with alcoholic beverages) off the installation	<input type="radio"/>					
e. From vending machines	<input type="radio"/>					
f. From mobile snack or lunch trucks	<input type="radio"/>					
g. Other (write it below and indicate how often)	<input type="radio"/>					

23. Listed below are 14 GENERAL AREAS OF CONCERN. For each area indicate whether in your opinion it is very bad, moderately bad, neither bad nor good, moderately good, or very good for your dining facility.

Area or topic	Very Bad	Moderately Bad	Neither Bad Nor Good	Moderately Good	Very Good
a. Convenience of location	⊕	⊖	⊖	⊕	⊖
b. General dining facility environment	⊕	⊖	⊖	⊕	⊖
c. Degree of military atmosphere present	⊕	⊖	⊖	⊕	⊖
d. Desirable eating companions	⊕	⊖	⊖	⊕	⊖
e. Expense	⊕	⊖	⊖	⊕	⊖
f. Hours of operation	⊕	⊖	⊖	⊕	⊖
g. Monotony of same facility	⊕	⊖	⊖	⊕	⊖
h. Quality of food	⊖	⊖	⊖	⊖	⊖
i. Quantity of food	⊕	⊖	⊖	⊖	⊖
j. Service by dining facility personnel	⊕	⊖	⊖	⊕	⊖
k. Variety of the regular meal food (weekday only)	⊕	⊖	⊖	⊖	⊖
l. Variety of the regular meal food (weekend only)	⊕	⊖	⊖	⊖	⊖
m. Variety of the short order food	⊕	⊖	⊖	⊖	⊖
n. Speed of service or lines	⊕	⊖	⊖	⊖	⊖

24. For each of the same 14 general areas, indicate whether it is a major reason for your degree of NON-ATTENDANCE at the dining facility, a minor reason for your degree of non-attendance, or not related to your degree of non-attendance.

Area or topic	Major reason for non-attendance	Minor reason for non-attendance	Not related to non-attendance
a. Convenience of location	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. General dining facility environment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Degree of military atmosphere present	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Desirable eating companions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Expense	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Hours of operation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Monotony of same facility	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Quality of food	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Quantity of food	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Service by dining facility personnel	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Variety of the regular meal food (weekday only)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Variety of the regular meal food (weekend only)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Variety of the short order food	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Speed of service or lines	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Other (please specify _____)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. How would you rate this dining hall in comparison to other military dining halls in which you have eaten? This dining hall is: (Darken the appropriate circle.)

Much Worse	Slightly Worse	No Better or Worse	Slightly Better	Much Better
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. If you have a REGULARLY SCHEDULED ACTIVITY which keeps you from attending the dining facility at certain times, indicate how many meals per week you do not attend because of this activity. (Indicate "zero meals not attended" if you have no such activity.)

Meals not attended: 0 1 2-4 5 6-7 8-10 More than 10

27. Concerning the degree of MILITARY ATMOSPHERE which you feel exists in your dining facility at the present time, indicate whether you feel there should be MORE or LESS military atmosphere in the future.

A Lot More <input type="checkbox"/>	A Little More <input checked="" type="checkbox"/>	About the Same <input type="checkbox"/>	A Little Less <input type="checkbox"/>	A Lot Less <input type="checkbox"/>
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28. Indicate approximately how many minutes it takes you to travel from your:

	1-5 min <input type="checkbox"/>	6-10 min <input type="checkbox"/>	11-15 min <input type="checkbox"/>	16-20 min <input type="checkbox"/>	21-25 min <input type="checkbox"/>	26-30 min <input type="checkbox"/>	Over 30 min <input type="checkbox"/>
a. Job site to dining facility							
b. Living area to dining facility							

29. Is your dining facility ever:

	Never <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Often <input type="checkbox"/>	Always <input type="checkbox"/>
a. Too cold				
b. Too warm				
c. Stuffy				
d. Smoky				
e. Full of steam				
f. Full of unpleasant food odors				

30. How often do you find:

	Never <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Often <input type="checkbox"/>	Always <input type="checkbox"/>
a. Inappropriate or missing silverware				
b. Not enough condiments (ketchup, etc.)				
c. Serving line has run out of items				

31. For each pair of items below, please indicate your opinion of THE GENERAL CONDITION OF YOUR DINING FACILITY by darkening the circle which comes closest to describing your feelings.

		Extremely	Moderately	Neutral	Moderately	Extremely	
a.	Clean kitchen area	<input type="radio"/>	Dirty kitchen area				
b.	Insect infested	<input type="radio"/>	Insect free				
c.	Clean serving counters	<input type="radio"/>	Dirty serving counters				
d.	Dirty dispensing devices	<input type="radio"/>	Clean dispensing devices				
e.	Dirty silverware	<input type="radio"/>	Clean silverware				
f.	Clean trays	<input type="radio"/>	Dirty trays				
g.	Clean dishes and glasses	<input type="radio"/>	Dirty dishes and glasses				
h.	Dirty floors	<input type="radio"/>	Clean floors				
i.	Dirty tables and chairs	<input type="radio"/>	Clean tables and chairs				
j.	Brightly lighted	<input type="radio"/>	Dimly lighted				
k.	Sunny	<input type="radio"/>	Lacking in sunlight				
l.	Quiet	<input type="radio"/>	Noisy				
m.	Crowded	<input type="radio"/>	Uncrowded				
n.	Roomy	<input type="radio"/>	Cramped				
o.	Pleasant view	<input type="radio"/>	Unpleasant view				
p.	Low number of safety hazards	<input type="radio"/>	High number of safety hazards				
q.	Unpleasant exterior appearance	<input type="radio"/>	Pleasant exterior appearance				
r.	Unpleasant interior appearance	<input type="radio"/>	Pleasant interior appearance				
s.	Colorful	<input type="radio"/>	Drab				
t.	Beautiful	<input type="radio"/>	Ugly				
u.	Relaxed	<input type="radio"/>	Tense				

32. Indicate your opinions about CONVENIENCES WITHIN YOUR DINING FACILITY.

		Extremely	Moderately	Neutral	Moderately	Extremely	
a.	Convenient to enter & leave	<input type="radio"/>	Inconvenient to enter & leave				
b.	Far from washroom	<input type="radio"/>	Close to washroom				
c.	Inadequate table size for size of trays	<input type="radio"/>	Adequate table size for size of trays				

33. Indicate the TABLE SIZE you prefer:

2 persons	4 persons	6 persons	8 persons	More than 8 persons
<input type="radio"/>				

34. Indicate your opinion about the following SOCIAL aspects of your dining facility.

	Never	Sometimes	Often	Always
The feeling of privacy is quite good in this dining hall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Room conditions are acceptable for relaxed conversation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a friendly social atmosphere in this dining hall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. Do you have MUSIC in your dining facility now? Yes No

36. What is your reaction to having MUSIC in the dining facilities:

Very Acceptable	Mildly Acceptable	Neutral	Mildly Unacceptable	Very Unacceptable
<input type="radio"/>				

37. Indicate the THREE types of music you would most prefer in the dining facilities:

- Any type is fine
- Hard rock
- Soul
- Popular
- Rock and roll
- Jazz
- Instrumental
- Classical
- Country western
- Other (write it here) _____
- Do not want music

38. Does your dining facility use a SELF BUSSING system in which each person carries his own tray to the dishwashing area?

Yes
① No
②

39. Indicate how you do or would feel about having SELF BUSSING in the dining facilities:

Very Acceptable ①	Mildly Acceptable ②	Neutral ③	Mildly Unacceptable ④	Very Unacceptable ⑤
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40. WHAT HOURS WOULD YOU LIKE THE DINING FACILITY OPEN? For each type of meal darken TWO circles, one to indicate your feeling about the time the dining hall opens AND the other to indicate your feeling about the time the dining hall closes.

	1 Hour Earlier	Opening 1/2 Hour Earlier	OK as Is	1 Hour Later	Closing 1/2 Hour Later	OK as Is
Weekday Breakfast	①	②	③	①	②	③
Weekday Mid-day Meal	①	②	③	①	②	③
Weekday Evening Meal	①	②	③	①	②	③
Weekend Breakfast	①	②	③	①	②	③
Weekend Mid-day Meal	①	②	③	①	②	③
Weekend Evening Meal	①	②	③	①	②	③

41. Is the food in your mess hall ever:

	Never	Sometimes	Often	Always
a. Overcooked	①	②	③	④
b. Undercooked	①	②	③	④
c. Cold	①	②	③	④
d. Tasteless or bland	①	②	③	④
e. Burned	①	②	③	④
f. Dried out	①	②	③	④
g. Greasy	①	②	③	④
h. Tough	①	②	③	④
i. Too spicy	①	②	③	④
j. Raw	①	②	③	④
k. Still frozen	①	②	③	④
l. Too salty	①	②	③	④
m. Full of gristle	①	②	③	④
n. Spoiled	①	②	③	④
o. Stale	①	②	③	④
p. Fatty	①	②	③	④

42. Other than times of dieting, do you ever LEAVE your dining facility WITHOUT ENOUGH TO EAT?

NEVER ①	SOMETIMES ②	OFTEN ③	ALWAYS ④
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43. Do you serve yourself or do the dining facility personnel serve you the following items?

	SELF-SERVICE	SERVED BY OTHERS
a. Short order items	<input type="radio"/>	<input checked="" type="radio"/>
b. Meat items	<input type="radio"/>	<input checked="" type="radio"/>
c. Starches (i.e., potatoes)	<input type="radio"/>	<input checked="" type="radio"/>
d. Vegetables	<input type="radio"/>	<input checked="" type="radio"/>
e. Salads	<input type="radio"/>	<input checked="" type="radio"/>
f. Beverages	<input type="radio"/>	<input checked="" type="radio"/>
g. Desserts	<input type="radio"/>	<input checked="" type="radio"/>

44. Are SECOND HELPINGS PERMITTED for the following items?

	Always	Sometimes	Never
a. Short order items	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
b. Meat items	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
c. Starches (i.e., potatoes)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
d. Vegetables	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
e. Salads	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
f. Beverages	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
g. Desserts	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

45. For each of the following foods, indicate your opinion of the AMOUNT GIVEN IN ONE SERVING. Darken the circle under NA (Not Appropriate) if you have self-service and/or second helpings are permitted.

	Much Too Small	Slightly Too Small	Just Right	Slightly Too Large	Much Too Large	NA
a. Meat	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
b. Starches	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
c. Vegetables	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
d. Dessert	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

46. For each pair of items below, please describe the FOOD SERVICE WORKERS on the serving line in your dining facility.

	Extremely	Moderately	Neutral	Moderately	Extremely
Clean	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unpleasant	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Well Trained	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard Working	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide Slow Service	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dirty					
Pleasant					
Poorly Trained					
Not Hard Working					
Provide Fast Service					

47. Indicate your opinion about the ATTITUDES of the dining facility WORKERS to make your meal as pleasant as possible.

Very Poor	Average	Excellent
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

48. Indicate your opinion of the VARIETY of offerings at any particular WEEKDAY meal.

We need:	Much More Choice	Slightly More Choice	Choice Now Enough	Slightly Less Choice	Much Less Choice
a. For short order foods:	<input type="radio"/>				
b. For meats:	<input type="radio"/>				
c. For starches:	<input type="radio"/>				
d. For vegetables:	<input type="radio"/>				
e. For salads:	<input type="radio"/>				
f. For beverages:	<input type="radio"/>				
g. For desserts:	<input type="radio"/>				

49. Indicate your opinion of the VARIETY of offerings at any particular WEEKEND meal.

We need:	Much More Choice	Slightly More Choice	Choice Now Enough	Slightly Less Choice	Much Less Choice
a. For short order foods:	<input type="radio"/>				
b. For meats:	<input type="radio"/>				
c. For starches:	<input type="radio"/>				
d. For vegetables:	<input type="radio"/>				
e. For salads:	<input type="radio"/>				
f. For beverages:	<input type="radio"/>				
g. For desserts:	<input type="radio"/>				

50. Indicate your opinion of the VARIETY of foods offered in the menu during the course of a month or so.

We need:	Much More Choice	Slightly More Choice	Choice Now Enough	Slightly Less Choice	Much Less Choice
a. For short order foods:	<input type="radio"/>				
b. For meats:	<input type="radio"/>				
c. For starches:	<input type="radio"/>				
d. For vegetables:	<input type="radio"/>				
e. For salads:	<input type="radio"/>				
f. For beverages:	<input type="radio"/>				
g. For desserts:	<input type="radio"/>				

51. Is CARRY OUT SERVICE available in your dining facility? (Disregard any flight feeding programs in this and the following two questions.)

Yes
No

Indicate how you do or would feel about CARRY OUT SERVICE being available from the dining facilities.

Extremely opposed Neutral Extremely Enthusiastic

52. How long do you USUALLY have to WAIT in line at the headcount station TO GET ADMITTED for a meal?

- ① I never have to wait in line.
- ② I wait between one and five minutes.
- ③ I wait between five and ten minutes.
- ④ I wait between ten and fifteen minutes.
- ⑤ I wait longer than fifteen minutes.

53. How long do you USUALLY have to WAIT IN THE SERVING LINE after the headcount before you get your food?

- ① I never have to wait in line.
- ② I wait between one and five minutes.
- ③ I wait between five and ten minutes.
- ④ I wait between ten and fifteen minutes.
- ⑤ I wait longer than fifteen minutes.

54. How long do you USUALLY have to WAIT AT THE DISH WASHING AREA when self-bussing?

- ① I never have to wait in line.
- ② I wait between one and five minutes.
- ③ I wait between five and ten minutes.
- ④ I wait between ten and fifteen minutes.
- ⑤ I wait longer than fifteen minutes.
- ⑥ Not applicable; no self bussing.

55. For each of the following RULES FOR BEHAVIOR darken TWO circles, one to indicate whether or not the rule exists in your dining facility AND the other to indicate whether you want the rule, do not want it, or have no opinion about it.

	Does Rule Exist?		Do You Want the Rule?		
	Yes	No	Yes	No	No Opinion
a. Dress regulations	<input type="radio"/>				
b. Not allowing civilian guests	<input type="radio"/>				
c. Calling "at ease" when officer enters	<input type="radio"/>				
d. No smoking	<input type="radio"/>				
e. Officers and NCO's permitted to cut in line	<input type="radio"/>				
f. Separation of officers and NCO's from enlisted men	<input type="radio"/>				

56. How important are the following factors in influencing what foods you choose to eat?

	Of Major Importance	Of Minor Importance	Unimportant
Food Appearance	⊕	⊖	⊖
Food Variety	⊕	⊕	⊖
Food Cost	⊕	⊖	⊖
Familiarity With the Food	⊕	⊖	⊖
Nutritional Value of the Food	⊕	⊖	⊖
Number of Calories in the Food	⊕	⊖	⊖
Your Liking of the Food	⊕	⊖	⊖
How Well the Food Goes With Other Foods You Choose	⊕	⊖	⊖

57. Are you currently on a diet?

Yes No

APPENDIX B-2

Alternative Rations System Survey

ALTERNATIVE RATIONS SYSTEM SURVEY

The Department of Defense is currently considering new and different ways of providing food service to troops. In making a final decision, they must decide on three important issues. First, they must decide whether all personnel should receive BAS (Basic Allowance for Subsistence, meaning money instead of free food) or whether only some should receive BAS while others receive SIK (Subsistence In Kind, meaning free food instead of money). Secondly, the decision must be made whether a civilian contractor or the government should operate the dining halls, obtain the food, and provide the food service worker. And, thirdly, they must decide whether an individual eating in the dining hall should: (a) be charged a fixed amount for his meals; (b) be charged only for the items he takes from the serving line; or (c) be able to choose among a more expensive "special" meal, a normally priced "regular" meal, or a less expensive "short order" meal, in each case being charged for the total meal.

An important element in these decisions is how you, the consumer, feel about each of these matters. For each of the three issues mentioned above, therefore, please indicate what decisions you feel would lead to the BEST food system.

ISSUE 1. The BEST food system would have (mark one):

All individuals receiving BAS	<input type="radio"/>	Some receiving BAS and others receiving SIK	<input type="radio"/>
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ISSUE 2. The BEST food system would be operated, and the food and food service workers provided, by (mark one):

A civilian contractor	<input type="radio"/>	The government	<input type="radio"/>
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ISSUE 3. The BEST food system would charge the individual (mark one):

A fixed amount for a meal	<input type="radio"/>	For only the items taken	<input type="radio"/>	For a "special," "regular," or "short order" meal	<input type="radio"/>
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Assume that, in designing a new food system, the Department of Defense followed the decisions you just indicated. Then, please answer the following four questions about that food system.

QUESTION 1. Under this food system, I would eat in the dining hall (mark one):

Never	<input type="radio"/>	Less than once a week	<input type="radio"/>	1-3 times a week	<input type="radio"/>	4-7 times a week	<input type="radio"/>	8-14 times a week	<input type="radio"/>	15 times or more a week	<input type="radio"/>
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QUESTION 2. Under this food system, the amount of plate waste of food would be (mark one):

Extremely high	<input type="radio"/>	Slightly high	<input type="radio"/>	Neither high nor low	<input type="radio"/>	Slightly low	<input type="radio"/>	Extremely low	<input type="radio"/>
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QUESTION 3. In terms of the amount of money it would cost me to eat, this food system would be (mark one):

An extremely good deal	<input type="radio"/>	A slightly good deal	<input type="radio"/>	Neither a good nor bad deal	<input type="radio"/>	A slightly bad deal	<input type="radio"/>	An extremely bad deal	<input type="radio"/>
------------------------	-----------------------	----------------------	-----------------------	-----------------------------	-----------------------	---------------------	-----------------------	-----------------------	-----------------------

QUESTION 4. My overall opinion of this food system is (mark one):

Extremely favorable	<input type="radio"/>	Slightly favorable	<input type="radio"/>	Neither favorable nor unfavorable	<input type="radio"/>	Slightly unfavorable	<input type="radio"/>	Extremely unfavorable	<input type="radio"/>
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Consider once again the three issues described on the first page of this questionnaire. This time, for each of these three issues, please indicate what decisions you feel would lead to the WORST food system.

ISSUE 1. The WORST food system would have (mark one):

All individuals
receiving BAS

Some receiving BAS and
others receiving SIK

ISSUE 2. The WORST food system would be operated, and the food and food service workers provided, by
(mark one):

A civilian contractor

The government

ISSUE 3. The WORST food system would charge the individual (mark one):

A fixed amount
for a meal

For only the
items taken

For a "special," "regular,"
or "short order" meal

Assume, once again, that the Department of Defense followed your decisions in designing a new food system. Again, please answer the following questions about this food system.

QUESTION 1. Under this food system, I would eat in the dining hall (mark one).

Never	Less than once a week <input type="radio"/>	1-3 times a week <input type="radio"/>	4-7 times a week <input type="radio"/>	8-14 times a week <input type="radio"/>	15 times or more a week <input type="radio"/>
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QUESTION 2. Under this food system, the amount of plate waste of food would be (mark one):

Extremely high <input type="radio"/>	Slightly high <input type="radio"/>	Neither high nor low <input type="radio"/>	Slightly low <input type="radio"/>	Extremely low <input type="radio"/>
--	---	--	--	---

QUESTION 3. In terms of the amount of money it would cost me to eat, this food system would be
(mark one):

An extremely good deal <input type="radio"/>	A slightly good deal <input type="radio"/>	Neither a good nor bad deal <input type="radio"/>	A slightly bad deal <input type="radio"/>	An extremely bad deal <input type="radio"/>
--	--	---	---	---

QUESTION 4. My overall opinion of this food system is (mark one):

Extremely favorable <input type="radio"/>	Slightly favorable <input type="radio"/>	Neither favorable nor unfavorable <input type="radio"/>	Slightly unfavorable <input type="radio"/>	Extremely unfavorable <input type="radio"/>
---	--	---	--	---

Currently, I receive (mark one):

BAS (money instead of free food)

SIK (free food instead of money)

APPENDIX C

Worker Survey and Interview Forms

FOOD SERVICE PERSONNEL SURVEY - PRE and POST-TEST

The purpose of this survey is to find out how you feel about some of the conditions of your job. Please answer every question CAREFULLY and HONESTLY. We will talk to each of you individually in the next few days, and you will be able to make any comments which do not fit into the answers on this survey at that time. NO INDIVIDUAL SURVEY WILL EVER BE SEEN BY ANYONE AT THIS BASE OR IN THE NAVY. If you answer all of the questions honestly, we will be able to present your opinions, as a group, to the organization working on the Food Service System for the Navy.

1. Rate _____
2. Age _____ years
3. How long have you worked in food service at this base? _____ yrs _____ mos
4. How long have you worked in food service in your Navy career?

yrs _____ mos
5. What do you do in your present job?
6. Circle the letter showing how much you like military service.
 - a. Dislike very much
 - b. Dislike moderately
 - c. Dislike a little
 - d. Neither like nor dislike
 - e. Like a little
 - f. Like moderately
 - g. Like very much

Description of the Work, People, Pay, Promotions
and Supervision on Your Present Job

Below are five groupings of items. Each group represents some aspect of your present job. We'd like you to indicate your feelings about these aspects by circling "Y" (yes) if the item is descriptive of your present job. "N" (no) if it is not descriptive and "?" if you cannot decide.

Again, we appreciate your cooperation.

WORK

Fascinating	Y	N	?
Routine	Y	N	?
Satisfying	Y	N	?
Boring	Y	N	?
Good	Y	N	?
Creative	Y	N	?
Respected	Y	N	?
Hot	Y	N	?
Pleasant	Y	N	?
Useful	Y	N	?
Tiresome	Y	N	?
Healthful	Y	N	?
Challenging	Y	N	?
On your feet	Y	N	?
Frustrating	Y	N	?
Simple	Y	N	?
Endless	Y	N	?
Gives sense of accomplishment	Y	N	?

SUPERVISION

Asks my advice	Y	N	?
Hard to please	Y	N	?
Impolite	Y	N	?
Praises good work	Y	N	?
Tactful	Y	N	?
Influential	Y	N	?
Up-to-date	Y	N	?
Doesn't supervise enough	Y	N	?
Quick-tempered	Y	N	?
Tells me where I stand	Y	N	?
Annoying	Y	N	?
Stubborn	Y	N	?
Knows job well	Y	N	?
Bad	Y	N	?
Intelligent	Y	N	?
Leaves me on my own	Y	N	?
Around when needed	Y	N	?
Lazy	Y	N	?

Description of the Work, People, Pay, Promotions
and Supervision on Your Present Job (Con't)

PEOPLE

Stimulating	Y	N	?
Boring	Y	N	?
Slow	Y	N	?
Ambitious	Y	N	?
Stupid	Y	N	?
Responsible	Y	N	?
Fast	Y	N	?
Intelligent	Y	N	?
Easy to make enemies	Y	N	?
Talk too much	Y	N	?
Smart	Y	N	?
Lazy	Y	N	?
Unpleasant	Y	N	?
No privacy	Y	N	?
Active	Y	N	?
Narrow interests	Y	N	?
Loyal	Y	N	?
Hard to meet	Y	N	?

PAY

Income adequate for normal expenses	Y	N	?
Satisfactory profit sharing	Y	N	?
Barely live on income	Y	N	?
Bad	Y	N	?
Income provides luxuries	Y	N	?
Insecure	Y	N	?
Less than I deserve	Y	N	?
Highly paid	Y	N	?
Underpaid	Y	N	?

PROMOTIONS

Good opportunity for advancement	Y	N	?
Opportunity somewhat limited	Y	N	?
Promotion on ability	Y	N	?
Dead-end job	Y	N	?
Good chance for promotion	Y	N	?
Unfair promotion policy	Y	N	?
Infrequent promotions	Y	N	?
Regular promotions	Y	N	?
Fairly good chance for promotion	Y	N	?

Food Service Personnel Pre-Test Interview

1. What do you think about the new system they are planning for this dining facility?
2. Anything good?
3. Anything bad?
4. Will it make your job easier or harder?
5. Why do you think it will?
6. Will it make your job any better or worse?
7. Why do you think it will?
8. Of what you have heard of the new system and what you know about the old system, which system do you think you would prefer?
9. Have you worked at any other military dining facilities besides this one?
10. How many?
11. How does this dining facility compare with others in which you have worked?

Do you think the customers (all on COMRATS) would prefer the present system in the dining hall where they pay item by item for the things they take or the previous system where they paid a flat price for the entire meal? F-34

Which system would you, as a food service worker, prefer? F-43

Why?

Do the customers who eat in this facility eat any differently now than before the changes in the dining hall were made? No = 2

Do you feel that the customers tend to eat any differently toward the end of a pay period than at the beginning of the period? (no = 0; yes = 1)

If yes, in what way?

Is the amount of food the average customer eats at a meal in the dining hall any more or less now than before the changes were made? (no = 0; less = 1; more = 2)

Are the kinds of foods the average customer eats at a meal in the dining hall any different now than before the changes were made? (no = 0; yes = 1)

If yes, what has changed?

Have you noticed whether people are leaving any more or less food on their plates now than before the changes were made? (no = 0; less = 1; more = 2)

Is the wait in line any shorter or longer since the changes were made? (no = 0; shorter = 1; longer = 2)

Is the food in the dining hall any better or worse now than before the changes were made? (no = 0; worse = 1; better = 2)

What is better (worse) about it?

Why is it better (worse)?

FOOD SERVICE PERSONNEL POST-TEST INTERVIEW

Do you NOW feel that you need more training to do your present job better? _____

If yes, what type of training? _____

Did you request assignment to food service (MIL ONLY)? _____

Would you like to get out of food service? _____

Why? _____

I would like to know, in general, about this new system that's being put in here. First, let me ask you to compare it to the old, meal card system using this card. A15

What's good about the new system in general?

What's bad about the new system in general?

Has the new system made your job easier or harder or has it stayed the same? B-21

Why?

Has it made your job better or worse or has it stayed the same? C-24

Why?

In general, is there anything the Navy can do to increase peoples attendance in the dining halls? (no = 0; yes = 1)

What is that?

Do you think there has been an overall increase or decrease in attendance since the changeover to the new system, or has it stayed the same? D-30

Would you as a food service worker prefer the customers to remain on commuted rations, or go back to rations-in-kind where they are authorized to eat in the dining hall for free? E-32

Why?

APPENDIX D

Statistical Analyses

STATISTICAL ANALYSES

(1) $\underline{F}(2, 496) = 52.81, \underline{p} < .001$ (21) $\underline{\chi}^2(2) = 11.43, \underline{p} < .005$
 (2) $\underline{F}(2, 520) = 66.83, \underline{p} < .001$ (22) $\underline{F}(1, 339) = 22.95, \underline{p} < .001$
 (3) $\underline{F}(2, 519) = 101.55, \underline{p} < .001$ (23) $\underline{F}(1, 137) = 13.00, \underline{p} < .001$
 (4) $\underline{F}(1, 496) = 5.92, \underline{p} < .05$ (24) $\underline{F}(1, 380) = 23.88, \underline{p} < .001$
 (5) $\underline{F}(1, 520) = 3.97, \underline{p} < .05$ (25) $\underline{F}(1, 380) = 16.19, \underline{p} < .001$
 (6) $\underline{F}(1, 519) = 8.94, \underline{p} < .01$ (26) $\underline{F}(1, 352) = 41.58, \underline{p} < .001$
 (7) $\underline{F}(1, 471) = 6.87, \underline{p} < .01$ (27) $\underline{\chi}^2(3) = 10.95, \underline{p} < .012$
 (8) $\underline{F}(2, 471) = 19.82, \underline{p} < .001$ (28) $\underline{\chi}^2(3) = 8.24, \underline{p} < .05$
 (9) $\underline{F}(2, 516) = 8.02, \underline{p} < .01$ (29) $\underline{\chi}^2(3) = 8.75, \underline{p} < .05$
 (10) $\underline{F}(3, 3760) = 1018.18, \underline{p} < .001$ (30) $\underline{\chi}^2(3) = 8.19, \underline{p} < .05$
 (11) $\underline{F}(1, 3760) = 1724.42, \underline{p} < .001$ (31) $\underline{\chi}^2(3) = 8.73, \underline{p} < .05$
 (12) $\underline{F}(3, 3760) = 247.57, \underline{p} < .001$ (32) $\underline{\chi}^2(3) = 12.25, \underline{p} < .01$
 (13) $\underline{F}(2, 2691) = 46.00, \underline{p} < .001$ (33) $\underline{\chi}^2(3) = 13.15, \underline{p} < .005$
 (14) $\underline{F}(2, 219) = 3.17, \underline{p} < .05$ (34) $\underline{F}(1, 132) = 10.08, \underline{p} < .005$
 (15) $\underline{F}(1, 408) = 23.35, \underline{p} < .001$ (35) $\underline{F}(1, 110) = 10.40, \underline{p} < .005$
 (16) $\underline{F}(1, 135) = 17.51, \underline{p} < .001$ (36) $\underline{F}(1, 127) = 31.99, \underline{p} < .001$
 (17) $\underline{F}(2, 437) = 5.15, \underline{p} < .01$ (37) $\underline{\chi}^2(2) = 6.39, \underline{p} < .05$
 (18) $\underline{F}(2, 387) = 6.35, \underline{p} < .01$ (38) $\underline{\chi}^2(3) = 10.38, \underline{p} < .02$
 (19) $\underline{F}(1, 372) = 12.63, \underline{p} < .001$ (39) $\underline{\chi}^2(2) = 1.40, \underline{p} < .50$
 (20) $\underline{\chi}^2(2) = 22.10, \underline{p} < .005$ (40) $\underline{\chi}^2(2) = 16.95, \underline{p} < .001$
 (41) $\underline{\chi}^2(3) = 4.39, \underline{p} < .20$

Note: Multiple pairwise comparisons among three of more groups within a factor producing a significant omnibus \underline{F} were made using the Scheffe' method with a .05 rejection region.